REGD NO. JKï ï 33

THE
JAMMU & KASHMIR GOVERNMENT GAZETTE

Vol. 131] Jammu, Thu., the 19th April, 2018/29th Chai., 1940. [No. 3

CONTENTS

	English Pages	Vernacular pages
PART I-Að Appointments, promotions, transfers and leave of absence sanctioned by the Governor, Government and the Ministers	24ï 34	
PART I-Bï Notifications, Communiques and General Orders by the Government and the Ministers	53ï 74	
PART 11-Aï Appointments, promotions, transfers and leave of absence sanctioned by Heads of Departments....	5ï 6	
PART II- Bï Notifications, Notices and Orders by Heads of Departments, Provincial Heads, Magistrates and other officers competent to issue public notices under any law or rule	31ï 48	
PART II-Cï Notifications, Notices and Orders by Election Commission of India, Chief Electoral Officer, Jammu and Kashmir and other Officers of the Department, Election Petitions and Judgements of Election Tribunal		
PART III- Laws, Regulations and Rules passed thereunder		
PART IVï Reprints from the Government of India Gazette or Gazettes of others Governments....		
PART Vï Information and Statistics .... (a) Rates and prices in the State.... (b) Rates and wages .... (c) Crop Report and Forecasts.... (d) Whether Observations .... (e) Vital Statistics		
SUPPLEMENT-Aï Trade Monthly Imports and Exports from the State		
SUPPLEMENT-Bï Police		
SUPPLEMENT-Cï Advertisements	9ï 18	9ï 12

Printed at the Ranbir Government Press, Jammu.

PART I-A

Jammu & Kashmir Government–Orders

HIGH COURT OF JAMMU AND KASHMIR AT SRINAGAR
(Exercising powers of Bar Council under section 58 of the Advocates Act, 1961).

Notification

No. 858 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Sharib Abbas Bakshi S/o Mr. Mohd Abbas Bakshi R/o Gopal Pora, Khurd Mattan, Anantnag has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-471/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 859 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms. Sana Nisar D/o Mr. Nisar Ahmad Pahalvi R/o Hamdania Colony, Chanapora, Khas, Srinagar has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of her Provisional/LL.B Degree Certificate from concerned University and verification of her character and antecedents

from CID. Her name has been entered under Serial No. JK-468/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 860 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Shabir Ahmad Wani S/o Mr. Mohd Ayoub Wani R/o Munad Guffan, Wani Mohalla, Yaripora, Kulgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-467/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 861 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms. Summaira Majid D/o Mr. Abdul Majid Nanda R/o Usmania Colony, Bemina, Sheltang, Srinagar has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of her Provisional/LL.B Degree Certificate from concerned University and verification of her character and antecedents from CID. Her name has been entered under Serial No. JK-466 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

ïïïïïïïï

Notification

No. 862 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Shafat Ahmad Dar S/o Mr. Ab. Salam Dar R/o Razwen, Budgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-465/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

ïïïïïïïï

Notification

No. 863 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Sheikh Inam-ul-Mansoor S/o Mr. Mansoor Ahmad R/o Kawoosa, Khalisa, Astaa Mohalla, Narbal, Budgam, A/Pð ð do.ð ð has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-463/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

ïïïïïïïï

ïïïïïïïð ïïïð ð ð

Notification

No. 864 Dated 17-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Showkat Ahmad Reshi S/o Mr. Nazir Ahmad Reshi R/o Reshi Mohalla, Keegam, Shopian has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-455/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

ïïïïïïïï

Notification

No. 865 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mudaser Ali S/o Mr. Ali Mohmad Bhat R/o Tulla-Mulla, Mesherpora, Ganderbal has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-413/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

ïïïïïïïï

Notification

No. 866 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Tariq Raja Wani S/o Mr. Mohammad Yousuf Wani R/o Makandpora Danow Wanipora, Qaimoh, Kulgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-533/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 867 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Aaqib Javeed S/o Mr. Javeed Iqbal Bhat R/o Laroo, Kulgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/ LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-532/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 869 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mubark Singh S/o Mr. Rattan Singh R/o Village and Post Office Kharote, Kathua, A/P A-15, Dream-Land Society, Sector-A, Trikuta Nagar, Jammu has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-411/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 870 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mubashar Mumtaz Sheikh S/o Mr. Mumtaz Ahmad Sheikh R/o Faridya Nari-Niketan, Doda has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-412/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 871 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms./Mr. Urfana Mursalat D/o/S/o. Peer Mohi-u-Din R/o Peer Zev, Kothi Bagh, Near GPO, Bund, Kothi Bagh, Srinagar has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his/her Provisional/LL.B Degree Certificate from concerned University and verification of his/her character and antecedents from CID. His/Her name has been entered under Serial No. JK-492/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 872 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Ummer Mehraj S/o Mr. Mehraj-ul-Din Ganie R/o Wuyan, Pampore, Ganie Mohalla, Pampore, Pulwama has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-517/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 873 Dated 18-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms. Inayat Rafiq D/o Mr. Mohammad Rafiq Wani R/o Sheri Bhat, Alamgari Bazar, Srinagar has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of her Provisional/LL.B Degree Certificate and verification of her character and antecedents from the concerned agency. Her name has been entered under Serial No. JK-393/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 874 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Syed Shabir S/o Syed Mohd Shah R/o Sumbal, Inderkote, Chana Mohalla, Bandipora has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-526/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 875 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mohd Saleem S/o Mr. Mohd Hussain R/o Thera Topa, Mendhar, Poonch, A/P Ward No. 2, Mohalla Kamsar, City Poonch has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-415/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 876 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms. Shoqie Jan D/o Mr. Ab. Rehman Naik R/o Naik Mohalla, Ahmad Abad, Kulgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of her Provisional/LL.B Degree Certificate from concerned University and verification of her character and antecedents from CID. Her name has been entered under Serial No. JK-454/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 877 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mohd Ashraf Wani S/o Mr. Ali Mohammad Wani R/o Hamdaniya Colony, Bemina, Street-E, H. No. 348, Near Ima Hussai Hospital, Budgam has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-419/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 878 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Mr. Mumtaz Ali S/o Mr. Bashir Ahmed R/o Mangota, Thanna Mandi, Rajouri has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of his Provisional/LL.B Degree Certificate from concerned University and verification of his character and antecedents from CID. His name has been entered under Serial No. JK-414/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

Notification

No. 879 Dated 19-08-2017.

It is hereby notified that vide High Court Order dated 02-08-2017 Ms. Mehak Mahajan D/o Mr. Raj Kumar Mahajan R/o 563-A, Gandhi Nagar, Jammu has been admitted and enrolled as an Advocate on the Rolls of Jammu and Kashmir Bar Council provisionally for a period of one year from the date of issuance of this notification, subject to the verification of her Provisional/LL.B Degree Certificate from concerned University and verification of her character and antecedents from CID. Her name has been entered under Serial No. JK-416/2017 in the Roll of Advocates maintained by this Registry.

The renewal/extension of provisional license/enrolment must be sought before the date of expiry unless the absolute/final enrolment as an Advocate is ordered therebefore.

(Sd.) MOHAMMAD YASIN BEIGH,

Joint Registrar (Admn.).

THE

JAMMU AND KASHMIR GOVERNMENT GAZETTE

ï ï

Vol. 131] Jammu, Thu., the 19th April, 2018/29th Chai,. 1940. [No. 3

ï ï

Separate paging is given to this part in order that it may be filed as a separate compilation

ï ï

PART I—B

Jammu and Kashmir Government—Notification.

ï ï ï ï ï ï ï

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 450-Rev (LAJ) of 2017

Dated 07-11-2017.

Whereas, the land, specifications whereof are given in ñAnnexure- Aò to this notification is required for public purpose viz. for construction of road from KM 10th of T02 to Lower Gursai, situated in Village Gursai, Tehsil Mendhar, District Poonch under PMGSY ;

Whereas, on the basis of an indent placed, Chief Engineer, PMGSY JKRRDA, Jammu vide No. CEJ/PMGSY/497-99 dated 10-04-2017, a notification under section 4 (1) was issued by Collector,

Land Acquisition (SDM), Mendhar vide No. SDM/LA/PMGSY/91-98 dated 24-04-2017 for land measuring 134 Kanals and 18 Marlas situated in Village Gursai, Tehsil Mendhar, District Poonch ;

Whereas, the Collector, Land Acquisition (SDM), Mendhar vide No. SDM/LA-PMGSY/Gursai/17/167 dated 20-06-2017 has reported that the notification issued under section 4 (1) of the J&K State Land Acquisition Act was served upon the interested persons for filing objections, if any, to the proposed acquisition, but no objection was received within the prescribed time period as required under sections 5 & 5-A of Land Acquisition Act ;

Whereas, the report furnished by Collector, Land Acquisition (SDM), Mendhar vide No. referred above duly endorsed by Deputy Commissioner, Poonch vide No. DCP/LA/477 dated 05-07-2017 has been examined and it has been found that the land owners/interested persons did not file any objection to the proposed acquisition ;

Whereas, the Government is satisfied that the land particulars whereof are given in ñAnnexure-Aò to this notification is required for public purpose viz. for construction of road from KM 10th of T02 to Lower Gursai, situated in Village Gursai, Tehsil Mendhar, District Poonch under PMGSY.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 134 Kanals and 18 Marlas situated in Village ñGursaiò, Tehsil Mendhar, District Poonch, particulars whereof are given in ñAnnexure-Aò to this notification is required for public purposes viz. for construction of road from Km 10th of T02 to Lower Gursai, under PMGSY. Further, the Collector, Land Acquisition (SDM), Mendhar, is directed under section 7 of the said Act to take order for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved

in the case and apportionment of compensation amongst all the intersted persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) MOHAMMAD ASHRAF MIR,

Commissioner/Secretary to the Government,
Revenue Department.

Annexure "A"

Particulars of land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Poonch	Mendhar	Gursai	1382	02 05
			1385	03 08
			1386	02 09
			983	02 01
			987	05 19
			985	00 03
			988	04 03
			990	00 10
			1564	01 14
			1563	00 07

1	2	3	4	5
				K. M.
			1509	00ï 11
			1512	02ï 17
			1511	00ï 09
			1507	02ï 02
			1505	01ï 07
			1497/1	01ï 01
			1497	01ï 13
			1496	00ï 16
			1494	00ï 13
			1493	00ï 02
			1485	01ï 11
			1484	00ï 07
			1524	13ï 06
			1536	01ï 10
			1533	02ï 12
			1534	01ï 00
			1595	07ï 16
			1539	00ï 12
			1538	02ï 03

1	2	3	4	5
				K. M.
			1551	00ï 15
			1550	00ï 13
			1553	02ï 01
			1552	00ï 05
			1522	03ï 15
			1381	07ï 06
			1354/1	00ï 14
			1358	00ï 11
			1354	01ï 10
			1350	00ï 12
			1355	01ï 00
			1343	03ï 07
			1336	02ï 03
			1338	00ï 16
			1342	07ï 01
			1336 min	01ï 15
			1372	01ï 08
			1373	01ï 15
			1374	00ï 11

1	2	3	4	5
				K. M.
			1371/1	02ï 11
			1377	03ï 08
			1426	00ï 19
			1413	01ï 19
			1410	01ï 12
			1409	01ï 07
			1402	02ï 08
			1406	00ï 17
			1406 min	01ï 10
			1450	03ï 09
			1417	03ï 19
			1418	01ï 07
			1420	00ï 09
			1421	00ï 18
			1434	00ï 06
			1435	00ï 19
			1439	01ï 08
			1436	00ï 08

1	2	3	4	5
				K. M.
			1437	00ï 07
			1438	00ï 05
			Total	134ï 18

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 01-Rev (LAJ) of 2018

Dated 03-01-2018.

Whereas, the land, specifications whereof are given in ñAnnexure- Aò to this notification is required for public purpose viz. for construction of approach road from Ind to Tatsun in Village Chachwah, Tehsil Gool, District Ramban ;

Whereas, on the basis of indent placed by Chief Engineer, Northern Railway, Sangalda, a notification under section 4 (1) was issued by Collector, Land Acquisition (SDM), Gool vide No. SDM/G/ Rly/322-30 dated 04-10-2017 for land measuring 487 Kanals 13 Marlas situated at Village Chachwah, Tehsil Gool, District Ramban ;

Whereas, the Collector, Land Acquisition (SDM), Gool vide No. SDM/G/Rly/251-60 dated 25-10-2017 has reported that the notification issued under section 4(1) of the J&K State Land Acquisition Act by him was served upon the interested persons for filing objections, if any, to the proposed acquisition, but no objection was received from the land owners/interested persons within the prescribed period as required under sections 5 & 5-A of Land Acquisition Act ;

Whereas, the report furnished by Collector, Land Acquisition (SDM), Gool vide above referred letter duly endorsed by District Collector (DC), Ramban vide No. DCJ/LA/Rbn/200-01 dated 20-11-2017 has been examined and it has been found that the land owners did not file any objection to the proposed acquisition ;

Whereas, the Government is satisfied that the land particulars referred above is required for public purpose viz. for construction of approach road from Ind to Tatsun in Village Chachwah, Tehsil Gool, District Ramban.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 487 Kanals 13 Marlas situated at Village Chachwah, Tehsil Gool, District Ramban, particulars whereof are given above at ñAnnexure-Aò is required for public purposes viz. for construction of approach road from Ind to Tatsun in Village Chachwah, Tehsil Gool, District Ramban. Further, the Collector, Land Acquisition, Sawlakote, Hydro Electric Project, Ramban is directed under section 7 of the said Act to take order for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/Rules.

Further, in pursuance of section 17 of the Land Acquisition Act, Samvat 1990, it is also ordered that on expiry of fifteen days from the publication of the notification under section 9 (2) of the said Act, the Collector will take possession of the aforementioned land in Village Chachwah, Tehsil Gool, District Ramban required for public purposes subject to fulfillment of the conditions prescribed under section 9(2) and section 17-A of the Land Acquisition Act and rule 63 of the Land Acquisition Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved in the case for making apportionment of compensation amongst all the

intersted persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) SHAFIQ AHMED RAINA, IAS,

Commissioner/Secretary to Government,
Revenue Department.

Annexure "A"

Particulars of land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Ramban	Gool	Chachawah	717/377	01 01
			378	25 00
			717/625 377	02 11
			919/435	16 16
			919/435	07 03
			919/435	01 05
			740/434	00 08
			501/493/ 434	11 12
			501/493/ 434	05 09
			740/434	02 04

1	2	3	4	5
				K. M.
			740/434	00ï 18
			919/435	01ï 12
			919/435 min	01ï 17
			919/435 min	03ï 06
			919/435 min	11ï 19
			501/493/434	09ï 06
			501/493/434	28ï 12
			501/493/434	03ï 11
			919/435 min	04ï 19
			919/435	03ï 05
			865/435 min	03ï 00
			860/435 min	02ï 10
			919/435 min	01ï 01
			919/435 min	04ï 17
			501/493/434	10ï 07
			501/493/434	08ï 08

1	2	3	4	5
				K. M.
			742/434	02ï 02
			919/435	04ï 09
			919/435 min	19ï 08
			919/435 min	09ï 10
			919 min	13ï 03
			919/435 min	10ï 17
			857/435	13ï 13
			845/435	09ï 11
			845/435 min	09ï 07
			845/435 min	06ï 15
			846/435 min	15ï 00
			446/435 min	09ï 09
			856/755/ 435	16ï 15
			856/755/ 435 min	06ï 09
			856/755/ 435 min	01ï 05
			856/755/ 435	03ï 18

1	2	3	4	5
				K. M.
			870/746/ 580/435	05ï 05
			870/846/ 580/435	00ï 11
			870/435 min	00ï 10
			870/435	11ï 15
			856/755/ 435	03ï 11
			856/755/ 435	10ï 08
			919/435 min	04ï 00
			856/755/ 435	06ï 05
			919/435	09ï 18
			919/435	08ï 16
			745/435	03ï 18
			754/435	00ï 04
			754/435	04ï 02
			849/435	06ï 07
			919/435	05ï 19
			919/435 min	02ï 18
			848/435	00ï 18

1	2	3	4	5
				K. M.
			848/435	17ï 11
			754/435	03ï 09
			852/435	03ï 18
			849/435	02ï 18
			845/435	06ï 04
			853/435	14ï 11
			919/435 min	10ï 00
			919/435 min	06ï 00
			919/435	09ï 15
			865/435	01ï 14
			864/745/ 561/435	02ï 00
				487ï 13

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 454-Rev (LAJ) of 2017

Dated 13-11-2017.

Whereas, the land specifications whereof are given in ñAnnexure- Aò to this notification is required for public purposes viz. construction of road from Jungrial to Treru under PMGSY in Village Treru, Tehsil Teryath and District Rajouri ;

Whereas, on the basis of indent prepared by Executive Engineer, PMGSY Division, Rajouri vide No. 1035-38 dated 21-11-2016, a notification under section 4 (1) was issued by Collector, Land Acquisition (SDM), Kalakote vide No. SDM/KK/826-88 dated 15-02-2017 for land measuring 24 Kanals 19 Marlas situated in Village Treru, Tehsil Teryath and District Rajouri ;

Whereas, the Collector, Land Acquisition (SDM), Kalakote has reported that the notification issued under section 4 (1) of the J&K State Land Acquisition Act by him was served upon the interested persons for filing objections, if any, to the proposed acquisition, but no objection was received from the land owners/interested persons within the prescribed period as required under sections 5 & 5-A of Land Acquisition Act ;

Whereas, the report furnished by Collector, Land Acquisition (SDM), Kalakote, duly endorsed by District Collector (DC), Rajouri vide No. AC/LA/658-60 dated 20-09-2017 has been examined and it has been found that the land owners did not file any objection to the proposed acquisition ;

Whereas, the Government is satisfied that the land particulars whereof are given above is required for public purpose viz. construction of road from Jungrial to Treru, under PMGSY.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 24 Kanals 19 Marlas situated in Village Treru, Tehsil Teryath and District Rajouri, particulars whereof are given in ñAnnexure Aò is required for public purposes viz. for construction of road from Jungrial to Treru under PMGSY. Further, the Collector, Land Acquisition (SDM), Kalakote is directed under section 7 of the said Act to take order for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/ Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved

in the case for making apportionment of compensation amongst all the intersted persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) SHAFIQ AHMED RAINA, IAS,

Commissioner/Secretary to Government,
Revenue Department.

Annexure "A"

Particulars of land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Rajouri	Teryath	Treru	1175	01 02
			1176	02 02
			1178	00 19
			1180	05 07
			1182	00 13
			1192	03 11
			1192 min	04 00
			1299	03 06
			1305	03 19
			Total	24 19

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 463-Rev (LAJ) of 2017

Dated 11-12-2017.

Whereas, the land, specifications whereof are given below is required for public purpose viz. for construction of road in Village Ghaink, Tehsil Bhalwal, District Jammu under PMGSY ;

Particulars of land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Jammu	Bhalwal	Ghaink	2426	00ï 11
			2431	00ï 08
			2459	00ï 16
			2460	02ï 14
			Total	04ï 09

Whereas, on the basis of an indent placed by Executive Engineer, PMGSY, Division Jammu vide No. EE/PMGSY/J/602-4 dated 01-07-2014, a notification under section 4 (1) was issued by Collector, Land Acquisition (ADC), Jammu vide No. ADC/LA/PMGSY/2014-15/ 339-46 dated 30-07-2017 for land measuring 04 Kanals and 09 Marlas situated in Village Ghaink, Tehsil Bhalwal, District Jammu ;

Whereas, the Collector, Land Acquisition (ACR) Jammu vide letter No. LA/ACR/PIGSTY/2015-16/632-33 dated 23-11-2015 has reported that the notification issued under section 4 (1) of the J&K State Land Acquisition Act was served upon the interested persons for filing objections, if any, to the proposed acquisition, but no objection was

received from the land owners/interested persons in the prescribed time period as required under sections 5 & 5-A of Land Acquisition Act ;

Whereas, the report furnished by Collector Land Acquisition (ACR), Jammu vide letter referred to above duly endorsed by Deputy Commissioner, Jammu vide No. DCJ/LA/PMGSY/Ghaink/2017-18/611-12 dated 30-08-2017 has been examined and it has been found that the land owners did not file any objection to the proposed acquisition ;

Whereas, the Government is satisfied that the land particulars whereof are given above is required for public purpose viz. for construction of road in Village Ghaink, Tehsil Bhalwal, District Jammu under PMGSY.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 04 Kanals and 09 Marlas situated in Village Ghaink, Tehsil Bhalwal, District Jammu, particulars whereof are given above is required for public purposes viz. for construction of road in Village Ghaink, Tehsil Bhalwal, District Jammu under PMGSY. Further, the Collector, Land Acquisition (SDM), Jammu North is directed under section 7 of the said Act to take order for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved in the case and apportionment of compensation amongst all the intersted persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) SHAHID ANAYTULLAH, IAS,

Commissioner/Secretary to the Government,
Revenue Department.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 467-Rev (LAJ) of 2016

Dated 21-12-2017.

Whereas, the land, specifications whereof are given below is required for public purpose viz. for construction of Ring Road in Village Sarore, Tehsil Bishnah, District Jammu by NHAI :ï ï

Particulars of the land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K.ï M.
Jammu	Bishnah	Sarore	1192 min	03ï 12
			1540 min	01ï 08
			Total	05ï 00

Whereas, on the basis of an indent placed by Project Director, NHAI, PIU, Jammu vide PD/JMU/LBG/Ring Road/Vol-II/667 dated 04-04-2016, a notification under section 4 (1) was issued by Collector, Land Acquisition (SDM), Jammu South vide No. SDM/Jmu-S/1381-87 dated 04-10-2017 for land measuring 05 Kanals situated in Village Sarore, Tehsil Bishnah, District Jammu ;

Whereas, the Collector, Land Acquisition (SDM), Jammu South vide No. SDM/JMU-S/1621-22 dated 03-11-2011 has reported that the notification issued under section 4(1) of the J&K State Land Acquisition Act was served upon the interested persons for filing objections, if any, to the proposed acquisition but no objection was received from the land owner/interested persons in the prescribed time period as required under sections 5 & 5-A of the Land Acquisition Act ;

Whereas, the report furnished by Collector, Land Acquisition (SDM), Jammu South vide letter referred to above duly endorsed by the Deputy Commissioner, Jammu, vide No. DCJ/LA/Ring Road/ Sarore/2017-18/993-94 dated 08-11-2017 has been examined and it has been found that the land owners did not file any objection to the proposed acquisition ; and

Whereas, the Government is satisfied that the land particulars whereof are given above is required for public purpose viz. for construction of Ring Road in Village Sarore, Tehsil Bishnah, District Jammu by NHAI.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 05 Kanals situated in Village Sarore, Tehsil Bishnah, District Jammu, particulars whereof are given above to this notification is required for public purpose viz. for construction of Ring Road by NHAI. Further, the Collector, Land Acquisition (SDM), Jammu South is directed under section 7 of the said Act to take orders for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/Rules.

Further, in pursuance of section 17 of the Land Acquisition Act, Samvat 1990, it is also ordered that on expiry of fifteen days from the publication of the notification under section 9 (2) of the said Act, the Collector will take possession of the aforementioned land in Village Sarore, Tehsil Bishnah, District Jammu required for public purposes, subject to the fulfillment of the conditions prescribed under section 9 (2) and section 17-A of the Land Acquisition Act and Rule 63 of the Land Acquisition Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved in the case and apportionment of compensation amongst all the interested persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) SHAHID ANAYTULLAH, IAS,

Commissioner/Secretary to the Government,
Revenue Department.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATð REVENUE DEPARTMENT.

Notification No. 464-Rev (LAJ) of 2017

Dated 15-12-2017.

Whereas, the land, specifications whereof are given in ñAnnexure ñAò to this notification is required for public purpose viz. for construction of T-13 Adit portal on Katra Dharam section of USBRL Project situated in Village Kahnikote and Dhanour, Tehsil Arnas, District Reasi by Northern Railways ;

Whereas, on the basis of an indent placed by Chief Engineer (Constt.) Northern Railway, Reasi vide No. Dy. CE/C/Reasi/Land/Indent/ T-13 dated 09-06-2015 a notification under section 4(1) was issued by Collector, Land Acquisition (SDM), Mahore vide No. SDM/CLA/NR/A/ 17-18/30-36 dated 18-07-2017 for land measuring 122 Kanals and 02 Marlas situated in Village ñKahnikoteò (112 K and 02 M) and Dhanour (10 K), Tehsil Katra, District Reasi ;

Whereas, the Collector, Land Acquisition (ADC), Reasi vide No. ADC/RSI/CLA/NR/17-18/55-57 dated 22-08-2017 has reported that the notification issued under section 4(1) of the J&K State Land Acquisition Act by him was served upon the interested persons for filing objections, if any, to the proposed acquisition and one objection submitted by Isher Singh, Hakam Singh, Mohinder Singh, Kartar Singh Sonôs of Anant Ram R/o Khaikote which stands disposed off by the concerned Collector Land Acquisition ;

Whereas, the report furnished by the Collector, Land Acquisition (ADC), Reasi vide No. referred to above, duly endorsed by the Divisional Commissioner, Jammu vide No. 502/3003/Acq/USBRL/ Khanikote-Dhanore/Rsi/17/3519-22 dated 15-11-2017 has been examined and it has been found that the land owners did file some objection to the proposed acquisition which were disposed off after proper scrutiny under rules ;

Whereas, the Government is satisfied that the land particulars whereof are given in ñAnnexure-Aò to this notification is required for

public purpose viz. for construction of T-13 Adit portal on Katra Dharam section of USBRL Project by Northern Railways.

Now, therefore, in pursuance of section 6 of the J&K State Land Acquisition Act, Samvat 1990, it is declared that land measuring 122 Kanals and 02 Marlas situated in Village ñKahnikoteò, (112 K and 02 M) and Dhanour (10 K), Tehsil Katra, District Reasi, particulars whereof are given at ñAnnexure-Aò to this notification is required for public purpose viz. for construction of T-13 Adit portal on Katra-Dharam section of USBRL Project by Northern Railways.

Further, the Collector, Land Acquisition (SDM), Mahore is directed under section 7 of the said Act to take order for acquisition of the said land after giving prescribed notice to the interested person(s) as required under the Land Acquisition Act/Rules.

However, the Collector concerned shall be personally responsible for identification and proper title verification of all types of land involved in the case and apportionment of compensation amongst all the interested persons/rightful claimants in accordance with the relevant laws/rules in force, while making the award.

(Sd.) SHAHID ANAYTULLAH, IAS,

Commissioner/Secretary to the Government,
Revenue Department.

Annexure "A"

Particulars of land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Reasi	Arnas	Khanikote	20	04ï 07
			21	05ï 11
			22	10ï 16

1	2	3	4	5
				K. M.
			23	03ï 10
			23 min	00ï 03
			24	07ï 18
			25	02ï 09
			269/43	12ï 00
			269/43	39ï 03
			45	02ï 10
			349/289/76	15ï 05
			313/243/232/123	08ï 10
			Total	112ï 02
Reasi	Arnas	Dhanour	646/613/339	01ï 02
			495/339	00ï 01
			312/550/339	08ï 17
			Total	10ï 00
			G. Total	122ï 02

THE

JAMMU AND KASHMIR GOVERNMENT GAZETTE

Vol. 131] Jammu, Thu., the 19th April, 2018/29th Chai., 1940. [No. 3

Separate paging is given to this part in order that it may be filed as a separate compilation.

PART II—A

Orders by Heads of Departments.

CHARGE REPORTS

Pursuant to Government Order No. 98-PD of 2018 dated 21-03-2018 and Endt. No. PD/HRM/47/2017 dated 21-03-2018, I, Gotam Lal Sharma, Dy. Director (P&S) hereby assume the additional charge of the Office of the Chief Planning Officer, Samba in addition to my own duties today the 22nd of March, 2018 F. N.

(Sd.) GOTAM LAL SHARMA,

District Statistical and Evaluation Officer,
Samba.

Pursuant to Government Order No. 98-PD of 2018 dated 21-03-2018 and Endt. No. PD/HRM/47/2017 dated 21-03-2018, I, Gotam Lal Sharma, Dy. Director (P&S) hereby assume the charge of the District Statistical and Evaluation Officer,p Samba today the 22nd of March, 2018 F. N.

(Sd.) GOTAM LAL SHARMA,

District Statistical and Evaluation Officer,
Samba.

THE
JAMMU & KASHMIR GOVERNMENT GAZETTE

Vol. 131] Jammu, Thu., the 19th April, 2018/29th Chai., 1940. [No. 3

Separate paging is given to this part in order that it may be filed as a separate compilation.

PART II—B

Notifications, Notices and Orders by Heads of Departments.

ð ï ð ð ï

OFFICE OF THE COLLECTOR, LAND ACQUISITION
(ADDITIONAL DEPUTY COMMISSIONER, UDHAMPUR).

Subject :ï Notification under section 4 (1) of Land Acquisition Act, 1990 BK for land measuring 0K-04M at Village Barrian, Tehsil and District Udhampur.

ï ï ï ï ï ï ï

Notification

In exercise of the powers vested in me under sub-section (1) of section 4 of the Land Acquisition Act, 1990 BK, I, Subash Chander Dogra, KAS Collector, Land Acquisition Assistant Commissioner, (Revenue) Udhampur do hereby notify that the land particulars of

which are given below is likely to be needed for public purpose i. e., for the construction/widening of NH-44 situated at Village Barrian, Tehsil and District Udhampur.

Objection, if any, to the acquistion of the said land shall be recived by undersigned either individually or through authorized agent within 15 days from date of issuance of this notification in my office at Deputy Commissioner Office Complex Udhampur.

Specification

District	Tehsil	Village	Khasra No.	Area
				K. M.
Udhampur	Udhampur	Barrian	486/164 min	00ï 04
			Total	00ï 04

(Sd.) SUBASH CHANDER (KAS),

Collector, Land Acquisition,
(Assistant Commissioner, Revenue),
Udhampur.

ï ï ï ï ï ï ï ï ï

GOVERNMENT OF JAMMU AND KASHMIR,
OFFICE OF THE COLLECTOR, LAND ACQUISITION
(ASSISTANT COMMISSIONER, REVENUE), KARGIL.

Subject :ï Notification under section 4 (1) of the Jammu and Kashmir Land Acquisition Act No. X of 1990 BK construction of Radio Station in Village Kangeroo (Malhar), Tehsil and District Udhampur.

ï ï ï ï ï ï ï

Notification

On the indent of Deputy Commissioner Udhampur vide No. DCU/SQ/5902-07 dated 13-12-2017 and in exercise of the

powers conferred upon me under section 4 (1) of the Land Acquisition Act, 1990 BK, I, Subash Chander Dogra, KAS Collector, Land Acquisition Assistant Commissioner Revenue), Udhampur do hereby notify that the land measuring 08 Kanal 01 Marla 04 Sarsai particulars of which shown below is likely to be needed for public purpose for construction of Radio Station in Village Kangeroo (Malhar), Tehsil and District Udhampur.

Objection, if any, to the acquistion of the said land will be received by undersigned within 15 days from date of publication of this notification in Government Gazette.

Specification of land

District	Tehsil	Village	Khasra No.	Area
				K. M. S.
Udhampur	Udhampur	Kangeroo	12	05ï 11ï 00
			15	01ï 03ï 00
			16	11ï 00ï 06
			92	00ï 02ï 07
			93	00ï 13ï 00
			Total	08ï 01ï 04

(Sd.) SUBASH CHANDER (KAS),

Collector, Land Acquisition,
(Assistant Commissioner, Revenue),
Udhampur.

OFFICE OF THE COLLECTOR LAND ACQUISITION
ASSISTANT COMMISSIONER REVENUE, JAMMU.

Notification

General Manager (P) NHIDCL vide No. NHIDCL/BO-JK/ Jammu-Akhnoor/2017-18/698 dated 19-09-2017 has placed an indent and District Collector entrusted the case to this Collectorate for disposal under Land Acquisition Act, 1990.

In exercise of the powers conferred upon me under sub-section (1) of section 4 of the Land Acquisition Act, 1990. I, Nisar Hamed Shad, KAS Collector, Land Acquisition Assistant Commissioner, Revenue, Jammu hereby notify that the land with particulars given below are likely to be needed for a public purpose namely Construction/ Widening of Jammu-Akhnoor Road in Village Nowabad, Tehsil and District Jammu.

Any objection with regard to acquisition of said land will be received by the undersigned within 15 days from the date of publication of thisnotification inthe newpapers.

Specification of the land

District	Tehsil	Village	Khasra Nos.	Area
1	2	3	4	5
				K. M.
Jammu	Jammu	Nowabad	51	00 04
			53	00 03
			64	46 13

1	2	3	4	5
				K. M.
			235	00ï 12
			236	03ï 13
			237	01ï 12
			275	04ï 13
			276	00ï 04
			277	00ï 08
			288	00ï 10
			290	00ï 08
			291	13ï 13
			367	57ï 00
			483	00ï 01
				ï ï ï ï
			Total	129ï 11
				ï ï ï ï

(Sd.) NISAR AHMED (KAS),

Collector, Land Acquisition,
Assistant Commissioner, Revenue,
(Collector Land Acquisition),
Jammu.

GOVERNMENT OF JAMMU AND KASHMIR,
OFFICE OF THE COLLECTOR, LAND ACQUISITION PHE,
IRRIGATION AND FLOOD CONTROL DEPARTMENT,
JAMMU.

Notification under section 9 and 9A of J&K Land Acquisition Act, 1990 (X of 1990).

Whereas, the land measuring 108 Kanals 03 Marlas thedetails ofwhich are given below is about to be taken up for public purpose, namely construction of water Storage Scheme (Sheck Dam) on Yakh Nallah situated at Villages Bhaiya and Gehra, Tehsil Hiranagar, District Kathua.

Whereas, the Government of J&K Revenue Department has issued the notification under sections 6&7 of J&K Land Acquisition Act, 1990 (X of 1990) vide Notification No. 457-Rev/(LAJ) of 2017 dated 13-11-2017 and the same Notification was further endorsed to this office by District Collector, Kathua vide his No. DCK/LA/2017-18/975-77 dated 21-11-2017 with the direction to this Collectorate to take order for acquisition of the said land under section 7 of J&K Land Acquisition Act, Samvat 1990.

Therefore, all the persons interested in the said land, through the medium of this notification are hereby called upon to attend this office personally or through their authorized agent within a period of 15 (Fifteen) days. from the date of publication of this notification to state the nature of respective interest in the land, particulars of their claims to the compensation for such interest and also their objections, if any, to the measurement of the said land. No such claim or objection shall be entertained after the expiry of the foresaid period as mentioned in this notification.

S. No.	Name of the Village, Tehsil and District	Name of the Owner	Name of the Cultivator/ Occupant	Khasra No.	Area
1	2	3	4	5	6
					K. M.
1.	Village Bhaiya Tehsil Hiranagar District Kathua	Shamlat Deh Gair Munqisma Malkan	Chajju S/o Anantu Brahman Gair marusi R/o Village Gehra	41 min	00ï 12
2.	do.	Bhagwan Dass S/o Milkhi Brahman R/o Village Bhaiya	Bhagwan Dass S/o Milkhi one Kanal, Jagdish Chander, Subash Chander Ss/o Premu and Anmol Sharma S/o Ram Pal in 12 Marlas	134 min	01ï 12

1	2	3	4	5	6
					K. M.
3.	do.	Jagdish Chander, Subash Chander Ss/o Premu and Anmol Sharma Son Shivani Sharma, Tania Sharma daughters and Sharda Sharma W/o Late Ram Pal Brahman R/o Village Bhaiya	Self Cultivation	135 min	00ï 18
4.	do.	do.	Maqbooja Malkan	136 min	01ï 16
5.	do.	do.	Maqbooja Malkan	137 min	01ï 07
6.	do.	do.	Bharat Bhushan S/o Romesh Chander	138 min	00ï 16

			and Shino Devi W/o Late. Sh. Hans Raj					
7.	do.	do.	Maqbooja Malkan	140	min	12ï 03		
8.	do.	Shamlat Deh Hasab Hisis Jaddi	Maqbooja Malkan	141	min	21ï 16		
1.	Village Gehra Tehsil Hiranagar District Kathua	Rattan Chand, Shiv Dutt Ss/o Santu, Kalidass, Munshi Ram, Tara Chand, Rakha Ram, Karam Chand, Bodh Raj Ss/o Nika and Gania S/o Chuha Brahmin Groch	Kewal Kumar, Rakesh Kumar Ss/o Kalidass	310	min	01ï 14		

1	2	3	4	5	6
					K. M.
		R/o Village Gehra			
2.	do.	do.	Bishan Dass	310 min	00ï 03
3.	do.	do.	Narsingh Dayal S/o Sadhu Ram	310 min	03ï 01
4.	do.	Shamlat Deh	Tara Chand S/o Nika	311 min	00ï 13
5.	do.	do.	Baij Nath S/o Moti	316 min	02ï 07
6.	do.	do.	Ganesh Dutt S/o Basdev Brahaman R/o Village Gehra	316 min	07ï 00
7.	do.	do.	Kewal Krishan, Rakesh Kumar Ss/o Kalidass	316 min	01ï 09

8.	do.	do.	Nar Singh Dayal S/o Sadhu Ram	316	min	03ï 07
9.	do.	do.	Subash Chander Ss/o Beli Brahaman	316	min	02ï 00
10.	do.	do.	Maqbooja Malkan	316	min	37ï 18
11.	do.	do.	Maqbooja Malkan	316	min	07ï 11
					Total	108ï 03

This notification is hereby issued under my seal and signature

(Sd.) ASHWANI KUMAR, (KAS),

Collector,
Land Acquisition,
PHE,I&FC Department,
Jammu.

GOVERNMENT OF JAMMU AND KASHMIR,
OFFICE OF THE DEPUTY COMMISSIONER, KISHTWAR.

Subject :ï Select list of candidates for the post of Class-IV (Orderly, Process Server and Sweeper) in the District Kishtwar advertised vide advertisement Notice No. DC/K/Recruitment/ 01 of 2012 dated 06 of 2012.

Order

Whereas, vide advertisement Notice No. DC/K/Recruitment/01 of 2012 dated 06 of 2012 (thirty one) 31 Posts of Class-IV in the District Kishtwar were advertised ; and

Whereas, the Interview of the shortlisted eligible candidates was conducted from 19-02-2018 to 21-02-2018 at Deputy Commissioner Complex (Mini Secretariat) Kishtwar.

Slection list of candidates for the post of orderly vide Advertisement No. DC/K/Recuritment/01 of 2012 dated 06-02-2012.

S. No.	Name	Parentage	Permanent Address Mohalla/ Village	Tehsil
1	2	3	4	5
Select List Open Category :				
1.	Aliya Abass	Gh. Abass Sheikh	Matta	Kishtwar
2.	Fayaz Ahmed Giri	Ab. Majid Giri	Plchhal	Kishtwar
3.	Altaf Hussain Malik	Ab. Aziz Malik	Yourdu	Marwah

1	2	3	4	5
Select List Open Category :				
4.	Amir Hussain Khan	Farooq Hussain	Patnazi	Kishtwar
5.	Sumaya Banoo	Gh. Mohd Lohar	Path Gam	Marwah
6.	Ravi Shanker Rathore	Ramesh Kumar Rathore	Simna	Kishtwar
7.	Rajni Thakur Thakur	Raghu Nath	Sounder Dachhan	Marwah
8.	Mohd Hanif Butt	Ghulam Rasool Butt	Nali Bunjwah	Kishtwar
9.	Adil Hussain Magray	Ab. Gani Magray	Pathgam	Marwah
Select List RBA Category :				
1.	Alyas Wahid Sheikh	Abdul Wahid Sheikh	Mir Mohalla	Marwah
2.	Bilal Ahmed Malik	Gh. Rasool	Yourdoo	Kishtwar
3.	Vickey Kumar	Sadhu Ram	Cherji	Kishtwar
Select List SC Category :				
1.	Anil Bhagat	Roshan Lal	Dharbadan	Kishtwar
2.	Arun Kumar	Rattan Kumar	Bhagna	Kishtwar
Select List ST Category :				
1.	Karma Tolma	Roshan Lal	Hango	Padder
2.	Mohd Iqbal	Ilam Din Bumal	Singhpura	Chtroo

Waiting list of candidates for the post of orderly vide Advertisement No. DC/K/Recuritment/01 of 2012 dated 06-02-2012.

1	2	3	4	5
Waiting List Open Category :				
1.	Firdous Ahmed	Mohd Amin Butt	Hidyal	Kishtwar
2.	Sachin Kumar	Bishroop Kumar	Saroor	Kishtwar
3.	Samreena Rashid	D/o Abdul Rashid	Rakna (Palmar)	Kishtwar
4.	Amit Kumar	Suresh Kumar Sharma	Kishtwar	Kishtwar
Waiting List RBA Category :				
1.	Ranit Kumar	Om Nath	Lohi-Dhar	Chatroo
2.	Saika Habib Rather	Habib-ullah Rather	Dehrana	Marwah
Waiting List SC Category :				
1.	Suresh Kumar	Shadi Lal	Saroor	Kishtwar
Waiting List ST Category :				
1.	Tenzen Dorjey	Sonam Narboo	Losani Padder	Padder

Selection list of candidates for the post of process server
vide Advertisement No. DC/K/Recuritment/01 of 2012
dated 06-02-2012.

1	2	3	4	5
Select List Open Category :				
1.	Arvinder Kumaar	Satish Kumar	Lopara Dachhan	Marwah
2.	Kuldeep Singh	Puran Chand	Drubeel	Chatroo
3.	Amit Kumar	Suresh Kumar	Kishtwar	Kishtwar
4.	Wasim Akram Batekh	Mohd Sabir Batekh	Bunjwah	Kishtwar
5.	Adil Khurshid	Khurshid Ahmed Kelam	Kishtwar	Kishtwar
6.	Firdous Ahmad	Mohd Amin	Hadyal	Kishtwar
7.	Anil Kumar	Guru Dutt	Zewar	Kishtwar
Select List RBA Category :				
1.	Sanjeeta Devi	Prem Nath	Chanjer Marwah	Marwah
2.	Muneeb Ahmed Rather	Ghulam Mohmad Rather	Inshan	Marwah
3.	Sajan Singh Palsar	Yog Raj Palsar	Nagsani	Kishtwar
Select List SC Category :				
1.	Amit Kumar	Munshi Ram	Sarthal	Kishtwar
Select List ST Category :				
1.	Mohd Hanief	Mohd Yousuf Kasana	Bunjwah	Kishtwar

Waiting list of candidates for the post of process server
vide Advertisement No. DC/K/Recuritment/01 of 2012
dated 06-02-2012.

1	2	3	4	5
Waiting List Open Category :				
1.	Wazir Ahmed	Ghulam Rasool Ganaie	Drubeel Chatroo	Chatroo
2.	Sumaya Naz	Gh. Ali Malik	Yourdu Marwah	Marwah
3.	Sanjeet Kumar	Shadi Lal	Wasser-Kishtwar	Kishtwar
Waiting List RBA Category :				
1.	Pardeep Kumar	Ravail Singh Thakur	Ishtyari	Padder
Waiting List SC Category :				
1.	Kavita Devi	Romesh Kumar	Hidyal	Kishtwar
Waiting List ST Category :				
1.	Tenzen Dorjay	Sonam Narboo	Lossani Padder	Padder

Selection list of candidates for the post of Sweeper/Chowkidar
vide Advertisement No. DC/K/Recuritment/01 of 2012
dated 06-02-2012.

1	2	3	4	5
Select List Open Category :				
1.	Ashaq Rasool Jamal	Gh. Rasool Jamal	Yourdu Marwah	Marwah
Select List RBA Category :				
1.	Imran Hussain	Ab. Aziz	Bhagran Sarthal	Kishtwar

Select List SC Category :

1.	Jagdish Raj	Sham Lal	Pochall	Kishtwar

Waiting List ST Category :

1.	Tenzen Dorjay	Sonam Narboo	Lossani Padder	Padder

Waiting list of candidates for the post of Sweeper/Chowkidar vide Advertisement No. DC/K/Recuritment/01 of 2012 dated 06-02-2012.

1	2	3	4	5

Waiting List Open Category :

1.	Hilal Ahmed Malik	Gh. Mohi-ud-Din Malik	Qadrana	Marwah

Waiting List RBA Category :

1.	Aamina Banoo	Shabir Ahmad Margay	Nowpachi Marwah	Marwah

Waiting List SC Category :

1.	Jiwan Lal	Roshan Lal	Gulabgarh	Padder

The appointment of each candidates, named above, shall be subject to the rider that if anything adverse is found against him/ her during the course of verification of his/her character, antecedents and the testimonials, his/her appointment shall be liable to be terminated/cancelled.

Further all the appointees are hereby directed to join within twenty one days from the date of the issuance of order and submit their joining report before the office Deputy Commissioner Kishtwar.

(Sd.) ANGREZ SINGH RANA, (KAS),

Chairman,
Class-IV Recruitment Committee,
Revenue Department,
(Deputy Commissioner Kishtwar).

Notice

I, Gurbinder Singh S/o Hansa Singh R/o Valmiki Colony, Gandhi Nagar, Jammu have applying for correction of my name in Pan Card as Gurbinder Singh instead of Gurvinder Singh. Objection, if any, may be conveyed to concerned authority within 7 days from the date if publication of this notice.

THE
JAMMU AND KASHMIR GOVERNMENT GAZETTE

Vol. 131] Jammu, Thu., the 19th April, 2018/29th Chai., 1940. [No. 3

Separate paging is given to this part in order that it may be filed as a separate compilation.

ADVERTISEMENTS—C

GOVERNMENT OF JAMMU AND KASHMIR,
DIRECTORATE OF SAINIK WELFARE, AMBPHALLA,
JAMMU.

Advertisement Notice No. 356-ESTT/DSW/2018

Dated 22-03-2018.

1. In terms of notification issued vide SRO-286 of 2nd Sept., 2003, applications are invited on the prescribed Proforma as per Appendix óAô from the ex-servicemen of the concerned District of J&K State for the under mentioned post :ï ï

Post	No. of Post	Pay Scale	Qualification	Place of Posting
1	2	3	4	5
Peon-cum-Chowkidar, ZSWO, Rajouri (District Cadre)	01	IS, 4440-7440 with GP 1300/-	(i) Should be a minimum Matric and Maximum 10+2 (An ex-serviceman who has passed Army First Class Certificate and has put in 15 years of service in the	ZSWO, Rajouri

Armed Forces shall be considered to be a Matriculate).

(ii) Should bear an Exemplary Character at the time of retirement from Defence Services.

2. The candidates should not be less than 34 years or more than 52 years of age as on 01 January, 2018.

3. Service terms and conditions and emoluments applicable as per relevant service rules of the State Government will apply.

4. Application forms should reach their concerned Zila Sainik Welfare Office by 20 April, 2018 positively duly completed in all respects along with following documents duly attested :

(a) Attested copy of Date of Birth Certificate.

(b) Matriculation Certificate issued by the recognized Institute/ Army at the time of retirement.

(c) Attested copies of Academic Qualification Certificate.

(d) Attested copy of Permanent Resident Certificate.

(e) Attested copy of Discharge Book from Army/Navy/IAF.

(f) Experience Certificate, if any.

(g) A self-addressed envelope duly stamped.

5. Incomplete applications will not be considered. The department has full right to reject the application forms not meeting the eligibility. Eligible ex-servicemen will have to appear for interview at the place, to be intimated later, at their own expense. The candidates who apply for the post and do not get call letters for Written Test/Interview will not seek reasons for rejection of their applications from the department.

(Sd.) BRIG. HARCHARAN SINGH (Retd.),

Director, Sainik Welfare.

OFFICE OF THE EXECUTIVE ENGINEER,
SUB-TRANSMISSION, DIVISION-IIND, JAMMU.

Notice Inviting Tender

e-NIT No. STD-II/MP-03 of 2018

Dated 29-03-2018.

For and on behalf of the Government of Jammu and Kashmir State e-NIT is hereby invited from reputed A-Class Electrical Contractors/ Registered Firms enlisted with CPWD/MES/Railway/Inspection Agency of PDD for outsourcing of operational staff for operation of newly created 10 MVA and 6.3 MVA 33/11KV, Receiving Stations at New Sainik Colony, Hakkal and Digiana respectively from 04/2018 to ending 03/2019 :ð

S. No.	Description of Work	Name of the Office	Earnest Money (in Rs.)	Cost of Bidding Documents (in Rs.)	Last Date for submission of Bid
1	2	3	4	5	6
1.	Providing of Switch Board Attendant for operation of 33/11KV Sub-Stations at New Sainik Colony, Hakkal and Digiana in 3 Shifts and 1 Shift (2 Skilled SBA per Shift) per Receiving Station.	Executive Engineer, Sub-Transmission Div-II, Jammu.	50000/-	500/-	11-04-2018
2.	Providing of 1 No. unskilled labour for cleaning of Control Room, Surroundings, Outdoor Yard of Sub-Stations at New Sainik Colony, Hakkal and Digiana (1 No. for 1 Shift per day) per Receiving Station.				

2. Bidders are advised to study the Bidding Document carefully. Submission of e-Bid against this SBD shall be deemed to have been done after careful study and examination of the procedures, terms and conditions of the Standard Bidding Document with full understanding of its implications by the bidder.

3. The tender document is available on website http://jktenders.gov.in. Interested bidders may view or download the e-Bid document, seek clarification and submit their e-Bid online up-to-date as per the details mentioned in the table below :ð

a.	Date and time of downloading of Standard Bidding Document	The Standard Bidding Document can be downloaded over http://jktenders.gov.in from 29-03-2018.
b.	Sale of Bid Document (Start)	31-03-2018 from 10.00 A. M.
c.	Sale of Bid Document (End)	10-04-2018 up to 4.00 P. M.
d.	e-Bid submission (start) date and time (submission of e-Tender fee, EMD and other supporting documents in PDF/XLS format)	03-04-2018 from 2.00 P. M.
e.	Last date of submission of hard copies of the document along with EMD and Tender Fee	12-04-2018 up to 4.00 P. M. in the Office of Executive Engineer, STD-II, Jammu.
f.	Online Commercial and Technical e-Bid opening date and time	16-04-2018 2.00 P. M.
g.	Online financial e-Bid opening date and time (only of the technically qualifed bidders)	Will be communicated to the technically qualified bidders.
h.	Venue of opening of technical and financial e-Bids	Office of the Executive Engineer, STD-II, Jammu.
k.	Cost of e-Bid document	Rs. 500/- (Rupees Five Hundred only).

l.	Amount of Earnest Money Deposit	Rs. 50000/- (Rupees Fifty Thousand only).

1. The bidders need to submit the proof/cost of e-Bid document as stated in the above table through non-refundable Demand Draft (Any Nationalized Bank preferably State Bank of India/J&K Bank) pledged to Executive Engineer, STD-II Jammu. The scanned copy of the Demand Draft must be enclosed along with the e-Bids but the original Demand Draft should reach the Office of Executive Engineer, STD-II, Jammu on 12-04-2018 up to 4.00 P. M.

2. All the e-Bids must be accompanied by the scanned copy of EMD in the form of CDR/FDR only, pledged to the Executive Engineer, STD-II, Jammu. No interest would be payable on Earnest Money deposited with the department.

3. Hard copy of original instrument of EMD shall be submitted to the Office of the Executive Engineer, STD-II, Jammu on 12-04-2018 up to 4.00 P. M.

4. The date and time of opening of financial bids shall be notified on website http://jktenders.gov.in. This is conveyed to the qualified bidders automatically through an e-mail message on their e-mail address. The financial bids shall be opened accordingly online on the same website at the Office of the Executive Engineer, STD-II, Jammu.

5. The e-Bids will be electronically opened in the presence of bidder's representatives, who choose to attend at the indentified venue on indicated date and time mentioned in the above table or any subsequent day to the convenience of the Tender Opening Committee. An authority letter of bidder's representative will be required to be produced.

6. The department reserves the right to cancel any or all the e-Bids/ the e-Bid process without assigning any reason thereof. The decision of department will be final and binding.

7. In the event of date specified for e-Bid opening being a holiday/ closed day for department's office then the due date for opening of e-Bids shall be the following working day at the same time and place.

8. All the required documents excluding Price Schedule/BoQ should be uploaded by the e-Bidder electronically in the PDF format, whereas

ï ð ð

Price Schedule/BoQ should be uploaded electronically in the same BoQ provided with the SBD.

9. To participate in e-Bidding process, bidders have to get ôDigital Signature Certificate (DSC)ô class III(b) as per Information Technology Act, 2000, to participate in online bidding.

10. Hard copy of technical bid, technical specification and commercial bid documents (complete) must be delivered to the Office of the Executive Engineer, STD-II, Jammu, in two sealed cover up to 12-04-2018 up to 4.00 P. M.

11. One sealed cover shall be scribed as Part-I Commercial Bid against e-NIT No. STD-II/MP-03 of 2018 dated 29-03-2018.

12. And another sealed cover shall be scribed as Part-II Technical Bid against e-NIT No. STD-II/MP-03 of 2018 dated 29-03-2018.

13. The name of the bidder and e-NIT No. shall be clearly written on the cover. It may be noted that the hard copy should be an exact replica of the uploaded offer documents. For evalution purposes the uploaded documents will be treated as authentic and final. The hard copy shall be used only for reference purpose. Any documents submitted in hard copy but not uploaded on the website shall be treated as irrelevant.

14. Other details can be seen in the bidding documents.

15. Any other information regarding e-Tendering process can be had from the Office of the Executive Engineer, STD-II, Jammu.

(Sd.) ....

Executive Engineer,
Sub-Transmission Division-II,
Jammu.

ð ð ð ð

POLICE HEADQUARTERS, JAMMU AND KASHMIR, JAMMU.

Extension Notice of NIT No. 07 of 2018

Dated 03-03-2018.

Due to administration reasons, following amendment is issued in PHQ, J&K NIT No. 07 of 2018 dated 03-03-2018, floated to purchase of ñTraffic Itemsò.

Last date for submission of online tenders shall be 12-04-2018 up to 1800 hrs. instead of 03-04-2018 at 1800 hrs.

Last date of opening of technical bids shall be 16-04-2018 at 1100 hrs instead of 05-04-2018 at 1100 hrs.

Other terms and conditions of the tender shall remain unchanged. Detailed tender documents with terms and conditions are available on J&K State e-Procurement Portal www.jktenders.gov.in.

(Sd.) .....

AIG (Provision/Transport)
For Director General of Police,
J&K, Jammu.

ð ð ð ð

OFFICE OF THE EXECUTIVE ENGINEER,
SUB-TRANSMISSION, DIVISION-IIND, JAMMU

Notice Inviting Tender

e-NIT No. STD-II/MP-04 of 2018

Dated 29-03-2018.

For and on behalf of the Government of Jammu and Kashmir State, e-NIT is hereby invited from reputed A-Class Electrical Contractors/ Registered Firms enlisted with CPWD/MES/Railway/Inspection Agency of PDD for outsourcing of operational staff for operation of newly created 10 MVA and 33/11KV, Receiving Station at Dhiansar (Birpur) respectively from 04/2018 to ending 03/2019 :ð

S. No	Description of Work	Name of .the Office	Earnest Money (in Rs.)	Cost of bidding Documents (in Rs.)	Last Date for submission of Bid
1	2	3	4	5	6
1.	Providing of Switch Board Attendant for operation of	Executive Engineer,	30000/-	500/-	11-04-2018

33/11KV Sub-Station at at Dhiansar (Birpur) in 3 Shifts and 1 relever Shift (2 Skilled SBA per Shift)	Sub-Transmission Div-II, Jammu.
2. Providing of 1 No. unskilled labour for cleaning of Control Room, Surroundings, Outdoor Yard of Sub-Station at Dhiansar (Birpur) (1 No. for 1 Shift per day)	

2. Bidders are advised to study the Bidding Document carefully. Submission of e-Bid against this SBD shall be deemed to have been done after careful study and examination of the procedures, terms and conditions of the Standard Bidding Document with full understanding of its implications by the bidder.

3. The tender document is available on website http://jktenders.gov.in. Interested bidders may view or download the e-Bid document, seek clarification and submit their e-Bid online up-to-date as per the details mentioned in the table below :ð

a.	Date and time of downloading of Standard Bidding Document	The Standard Bidding Document can be downloaded over http://jktenders.gov.in from 29-03-2018.
b.	Sale of Bid Document (Start)	31-03-2018 from 10.00 A. M.
c.	Sale of Bid Document (End)	10-04-2018 up to 4.00 P. M.
d.	e-Bid submission (start) date and time (submission of e-Tender fee, EMD and other supporting documents in PDF/XLS format)	03-04-2018 from 2.00 P. M.
e.	Last date of submission of hard copies of the document along with EMD and Tender Fee	12-04-2018 up to 4.00 P. M. in the Office of Executive Engineer, STD-II, Jammu.
f.	Online Commercial and Technical e-Bid opening date and time	16-04-2018 2.00 P. M.

g.	Online financial e-Bid opening date and time (only of the technically qualifed bidders)	Will be communicated to the technically qualified bidders.
h.	Venue of opening of technical and financial e-Bids	Office of the Executive Engineer, STD-II, Jammu.
k.	Cost of e-Bid document	Rs. 500/- (Rupees Five Hundred only).
l.	Amount of Earnest Money Deposit	Rs. 30000/- (Rupees Thirty Thousand only).

1. The bidders need to submit the proof/cost of e-Bid document as stated in the above table through non-refundable Demand Draft (Any Nationalized Bank preferably State Bank of India/J&K Bank) pledged to Executive Engineer, STD-II, Jammu. The scanned copy of the Demand Draft must be enclosed along with the e-Bids but the original Demand Draft should reach the Office of Executive Engineer, STD-II, Jammu on 12-04-2018 up to 4.00 P. M.

2. All the e-Bids must be accompanied by the scanned copy of EMD in the form of CDR/FDR only, pledged to the Executive Engineer, STD-II, Jammu. No interest would be payable on Earnest Money deposited with the department.

3. Hard copy of original instrument of EMD shall be submitted to the Office of the Executive Engineer, STD-II, Jammu on 12-04-2018 up to 4.00 P. M.

4. The date and time of opening of financial bids shall be notified on website http://jktenders.gov.in. This is conveyed to the qualified bidders automatically through an e-mail message on their e-mail address. The financial bids shall be opened accordingly online on the same website at the Office of the Executive Engineer, STD-II, Jammu.

5. The e-Bids will be electronically opened in the presence of bidderôs representatives, who choose to attend at the indentified venue on indicated date and time mentioned in the above table or any subsequent day to the convenience of the Tender Opening Committee. An authority letter of bidderôs representative will be required to be produced.

6. The department reserves the right to cancel any or all the e-Bids/ the e-Bid process without assigning any reason thereof. The decision of department will be final and binding.

7. In the event of date specified for e-Bid opening being a holiday/ closed day for departmentôs office then the due date for opening of e-Bids shall be the following working day at the same time and place.

8. All the required documents excluding Price Schedule/BoQ should be uploaded by the e-Bidder electronically in the PDF format, whereas Price Schedule/BoQ should be uploaded electronically in the same BoQ provided with the SBD.

9. To participate in e-Bidding process, bidders have to get ôDigital Signature Certificate (DSC)ô class III(b) as per Information Technology Act, 2000, to participate in online bidding.

10. Hard copy of technical bid, technical specification and commercial bid documents (complete) must be delivered to the Office of the Executive Engineer, STD-II, Jammu, in two sealed cover up to 12-04-2018 up to 4.00 P. M.

11. One sealed cover shall be scribed as Part-I Commercial Bid against e-NIT No. STD-II/MP-04 of 2018 dated 29-03-2018.

12. And another sealed cover shall be scribed as Part-II Technical Bid against e-NIT No. STD-II/MP-04 of 2018 dated 29-03-2018.

13. The name of the bidder and e-NIT No. shall be clearly written on the cover. It may be noted that the hard copy should be an exact replica of the uploaded offer documents. For evalution purposes the uploaded documents will be treated as authentic and final. The hard copy shall be used only for reference purpose. Any documents submitted in hard copy but not uploaded on the website shall be treated as irrelevant.

14. Other details can be seen in the bidding documents.

15. Any other information regarding e-Tendering process can be had from the Office of the Executive Engineer, STD-II, Jammu.

(Sd.) .....

Executive Engineer,
Sub-Transmission Division-II,
Jammu.

رجسٹرڈ نمبر جے کے۔33

جمّوں و کشمیر گورنمنٹ گزٹ

جلد نمبر 131۔جموں۔مورخہ 19 اپریل 2018ء بمطابق 29 چیتر 1940- ویروار۔نمبر 3

اِشتہارات

از عدالت سب جج جوڈیشل مجسٹریٹ درجہ اوّل بٹوت

سرکار بنام ماشوق علی وغیرہ

علت نمبر 71 سال 2017ء ، تھانہ پولیس بٹوت

بجرائم زیر دفعات :188 RPC 3 PC Act

وارنٹ اشتہاری زیر دفعہ 512 ض ف

بخلاف ملزم : پرویز احمد خان ولد قادر خان ساکنہ گوپال پورہ تحصیل مٹن ضلع اننت ناگ۔

حُکم بنام : اہلکاران پولیس ریاست جموں وکشمیر

مقدمہ مندرجہ عنوان اُلصدر میں چالان عنوان بالا پیش عدالت ہذا ہوا ہے، قرار بیان تفتیش کنندہ ملزم روپوش ہو چکا ہے اور تفتیش کنندہ نے استدعا کی ہے کہ ملزم مذکور کے خلاف وارنٹ اشتہاری زیر دفعہ 512 ض ف اجرا فرمایا جاوئے ،جس سے عدالت کو اطمینان ہو چکا ہے کہ اِسکی گرفتاری بغرض معمولی ہونی ناممکن ہے۔

لہٰذا وارنٹ ہذا اجرا کیا جا کر عام اہلکاران پولیس ریاست جموں وکشمیر کو حُکم کیا جاتا ہے کہ ملزم مذکور جہاں کہیں اندر حدود ریاست ہو، کو گرفتار کر کے پیش عدالت ہذا کریں۔ وارنٹ ہذا تا دستیابی ملزم زیر کار رہے گا۔

سرکار بنام منظور احمد وغیر

علت نمبر 72 سال 2017ء، تھانہ پولیس بٹوت

بجرائم زیر دفعات : 188 RPC 3 PCAct

وارنٹ اشتہاری زیر دفعہ 512 ض ف

بخلاف ملزم :پرویز احمد خان ولد قادر خان ساکنہ گوپال پورہ تحصیل مٹن ضلع اننت ناگ۔

حُکم بنام : اہلکاران پولیس ریاست جموں وکشمیر

مقدمہ مندرجہ عنوان اُلصدر میں چالان عنوان بالا پیش عدالت ہذا ہوا ہے ،قرار بیان تفتیش کنندہ ملزم روپوش ہو چکا ہے اور تفتیش کنندہ نے استدعا کی ہے کہ ملزم مذکور کے خلاف وارنٹ اشتہاری زیر دفعہ 512 ض ف اجرا فرمایا جاوئے جس سے عدالت کو اطمینان ہو چکا ہے کہ اِسکی گرفتاری بغرض معمولی ہونی ناممکن ہے ۔

لہٰذا وارنٹ ہذا اجرا کیا جا کر عام اہلکاران پولیس ریاست جموں وکشمیر کو حُکم کیا جاتا ہے کہ ملزم مذکور جہاں کہیں اندر حدود ریاست ہو، کو گرفتار کر کے پیش عدالت ہذ کریں۔وارنٹ ہذا تا دستیابی ملزم زیر کار رہے گا۔

سرکار بنام محمد اسحاق وغیرہ

مثل نمبر 8 / چالان، 06-03-2017

علت نمبر 10 سال 2017ء تھانہ پولیس چندرکوٹ

بجرائم زیر دفعات : 188 RPC 3 PCAct

وارنٹ اشتہاری زیر دفعہ 512 ض ف

بخلاف ملزم : محمد اسحاق ولد محمد شریف ساکنہ دگوار تہوان حویلی ضلع پونچھ، ڈرائیور ٹرک نمبری HP-12 / C/ 9 927 -

حُکم بنام : اہلکاران پولیس ریاست جموں وکشمیر

مقدمہ مندرجہ عنوان اُلصدر میں ملزم مذکورہ جو کہ بدستور غیر حاضر ہو چکا ہے اور اس نسبت بیان قلمبند ہو چکا ہے اور ملزم مذکورہ کو اشتہاری ملزم گردانہ جا کر وارنٹ ہذا اجرا کیا جاتا ہے۔

لہٰذا آپ اہلکاران پولیس ریاست جموں وکشمیر کو حُکم کیا جاتا ہے کہ ملزم مذکورہ جہاں کہیں بھی اندر حدود ریاست میں ہو، کو گرفتار کر کے عدالت ہذا میں پیش کریں۔ وارنٹ ہذا تا دستیابی ملزم زیر کار رہے گا۔

تحریر 17-01-2018

دستخط: سب جج جوڈیشل مجسٹریٹ درجہ اوّل بٹوت۔

•••••••••••

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 19th February, 2018.

SRO-94. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Sh. Sanjeev Kumar, KAS, Sub-Divisional Magistrate, Vijaypur, to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Sub-Division Vijaypur of District Samba.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 20th February, 2018.

SRO-97. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Sh. Kaisar Ahmad Bhawani, KAS, Sub-Divisional Magistrate, Marwah, holding additional charge of Assistant Commissioner, Kishtwar, to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Sub-Division Marwah of District Kishtwar.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 20th February, 2018.

SRO-98. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Mr. Imteeaz Kacho, KAS, Assistant Commissioner, Revenue, Kargil to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Tehsil Kargil of District Kargil.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT FINANCE DEPARTMENT

Notification

Jammu, the 21st February, 2018.

SRO-100. In exercise of the powers conferred by section 5 of the Jammu and Kashmir Levy of Tolls Act, Samvat, 1995, (Act No. VIII of 1995), the Government hereby exempt from payment of levy of tolls leviable under the said Act, the vehicles carrying 15000 Ballot Boxes from Himachal Pradesh for the use in the ensuing Panchayat Election, 2018 with the condition that Chief Electoral Officer, Jammu and kashmir certified that the said Ballot Boxes are required for use in the Panchayat Elections, 2018 in the State and shall be returned after the said elections are over.

By order of the Government of Jammu and Kashmir.

(Sd.) NAVIN K. CHOUDHARY, IAS,

Principal Secretary to Government,
Finance Department.

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT DEPARTMENT OF LAW, JUSTICE AND PARLIAMENTARY AFFAIRS
(Power Section)

Notification

Jammu, the 23rd of February, 2018.

SRO-102. In exercise of the powers conferred by sub-section (2) of section 10 of the Code of Criminal Procedure, Samvat 1989, the Government hereby appoint Sh. Harbans Lal, (KAS), Assistant Commissioner, Revenue, Reasi to be the Additional District Magistrate within his territorial jurisdiction of District Reasi, who shall exercise all the powers of District Magistrate under the said code.

By order of the Government of Jammu and Kashmir.

(Sd.) ABDUL MAJID BHAT,

Secretary to Government,
Department of Law, Justice and Parliamentary Affars.

Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

No. 47-d] The J&K Govt. Gazette, 26th Feb., 2018/7th Phal., 1939. Mon.
ïïï
EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

ïïïïïï

GOVERNMENT OF JAMMU AND KASHMIR
CIVIL SECRETARIATïï DEPARTMENT OF LAW, JUSTICE AND PARLIAMENTARY AFFAIRS
(Subordinate Legislation Section)

Notification

Jammu, the 26th February, 2018.

SRO-105.ïï In exercise of the powers conferred by section 5 of the Jammu and Kashmir Christian Marriage and Divorce Act, 1957, the Government hereby grants licence to Pastor Thomas Khokhar S/o Late Dr. Ghulam Masih, R/o 28, Christian Colony, Residency Road, Jammu (Minister of Religion) to solemnize marriage within the State in accordance with the provisions of the said Act.

By order of the Government of Jammu and Kashmir.

(Sd.) ABDUL MAJID BHAT,

Secretary to Government,
Department of Law, Justice and Parliamentary Affairs.

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 27th February, 2018.

SRO-109. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Shri Masarat Hashim, KAS, Assistant Commissioner, Revenue, Srinagar, to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Tehsils South, Panthchowk, Chanapora and Eidgah of District Srinagar.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIATï ï DEPARTMENT OF LAW, JUSTICE AND PARLIAMENTARY AFFAIRS
(Acquittal Section)

Notification

Jammu, the 27th of February, 2018.

SRO-110.ï ï In exercise of the powers conferred by sub-section (1) of section 492 of the Code of Criminal Procedure, Samvat 1989, the Government hereby appoints Shri Aijaz Ahmad Wani, CPO and Shri Riyaz Ahmad, Sr. PO Saddar Court Srinagar as Special Public Prosecutors to conduct the case FIR No. 51/2017 Police Station, Nowhatta involving offences punishable under sections 302, 148, 392, 341 RPC 13 ULA (P) Act pending adjudication before the court of 4th Additional Sessions Judge, Srinagar.

By order of the Government of Jammu and Kashmir.

(Sd.) ABDUL MAJID BHAT,

Secretary to Government,
Department of Law, Justice and Parliamentary Affars.

Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 28th February, 2018.

SRO-111. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Shri Shafiq Ahmad, KAS, Additional Deputy Commissioner, Koteranka, to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Tehsils Khawas and Koteranka of District Rajouri.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

PDF Complete
Your complimentary use period has ended. Thank you for using PDF Complete.
Click Here to upgrade to Unlimited Pages and Expanded Features

EXTRAORDINARY REGD. NO. JKð 33

PART I–B

Jammu and Kashmir Government—Notifications.

GOVERNMENT OF JAMMU AND KASHMIR,
CIVIL SECRETARIAT REVENUE DEPARTMENT

Notification

Jammu, the 28th February, 2018.

SRO-112. In exercise of the powers conferred by clause (b) of section 3 of the Jammu and Kashmir Grant of Permanent Resident Certificate (Procedure) Act, 1963 (Act No. XIII of 1963), and in supersession of all previous notifications issued in this behalf the Government hereby appoint Mr. Ahmad Hussain Bhat, KAS, Sub-Divisional Magistrate, Lolab Sogam, to be the competent authority for the purposes of the said Act within the territorial jurisdiction of Sub-Division Lolab Sogam, of District Kupwara.

By order of the Government of Jammu and Kashmir.

(Sd.) SHAHID ANAYATULLAH, IAS,

Commissioner/Secretary to Government,
Revenue Department.

EXTRAORDINARY REGD. NO. JKð 33

THE
JAMMU & KASHMIR GOVERNMENT GAZETTE

Vol. 130] Jammu, Fri., the 23rd Feb., 2018/4th Phal., 1939. [No. 47-aa

---

Separate paging is given to this part in order that it may be filed as a separate compilation.

PART III

Laws, Regulations and Rules passed thereunder.

ð ð ð ï

GOVERNMENT OF JAMMU AND KASHMIR
CIVIL SECRETARIATïï GENERAL ADMINISTRATION DEPARTMENT
(Services)

Notification

Jammu, the 23rd of February, 2018.

SRO-103.ïï In exercise of the powers conferred by the proviso to section 124 of the Constitution of Jammu and Kashmir, the Governor hereby makes the following rules for the conduct of Combined Competitive Examination by the Public Service Commission, namely :ïï

1. *Short title and application*.ïï (1) These rules may be called the Jammu and Kashmir Combined Competitive Examination Rules, 2018.

(2) These rules shall apply to the conduct of Combined Competitive Examination by Public Service Commission for direct recruitment to the following services :ï ï

(i) Junior Scale of J&K Administrative Service ;

(ii) J&K Police (Gazetted) Service ;

(iii) J&K Accounts (Gazetted) Service.

2. *Definitions*.ï ï In these rules unless the context otherwise requires,ï ï

(a) ñAvailable Vacanciesò mean the vacancies available in the direct recruitment quota of the services mentioned in rule 1 to be filled on the basis of Combined Competitive Examination ;

(b) ñCommissionò means the Jammu and Kashmir Public Service Commission ;

(c) ñExaminationò means the Combined Competitive Examination for recruitment to the direct recruitment posts of the services specified in rule 1;

(d) ñFeeò means the fee which may be charged by the Commission from a candidate for the Preliminary/Main Examination ;

(e) ñGovernmentò means Government of Jammu and Kashmir ;

(f) ñListò means the list of candidates prepared on the basis of merit in the examination for the various services and posts.

Explanation :ï ï Candidates shall be allotted to various services and posts keeping in view their merit in the examination and the preferences expressed by them for various services and posts ;

(g) ñPreferenceò means preference, for being selected for a service or post for which examination is being held under these rules, in the order in which these are mentioned by the candidate in the application form prescribed by the Commission ;ð

(h) ñRulesò means the Jammu and Kashmir Combined Competitive Examination Rules, 2018 ;

(i) ñStateò means the Jammu and Kashmir State.

3. *Conduct of examination*.ï ï (1) The examination shall be conducted by the Commission in accordance with the provisions of Jammu and Kashmir Public Service Commission (Conduct of Examination) Rules, 2005.

(2) The dates on which and the places at which the Preliminary and Main Examination will be held shall be fixed by the Commission.

4. *Duration of examinations*.ï ï The examination shall be held at such intervals as the Government may in consultation with the Commission from time to time determine, but at least once in a calendar year unless there are good and sufficient reasons for not doing so and preferably, as far as practicable, after 15 days from the completion of UPSC Civil Services examination at each stage.

5. *Indicating preference*.ï ï (1) A candidate shall be required to indicate in his/her application form for the Main Examination his/her order of preferences for various services/posts for which he/she would like to be considered for appointment in case he/she is recommended for appointment by the Commission.

(2) No change in preference of services once indicated by a candidate would be permitted.

Explanation :ï ï The candidate has to be very careful while indicating preferences for various services/posts. The candidate has

to indicate all the services/posts in the order of preference in his/her application form. In case he/she does not give any preference for any services/posts, it will be assumed that he/she has no specific preference for those services. If he/she is not allotted to any one of the services/posts for which he/she has indicated preference, he/she shall be allotted to any of the remaining services/posts in which there are vacancies after allocation of all the candidates who can be allocated to services/posts in accordance with their preferences.

6. *Number of vacancies to be filled up*.— The number of vacancies to be filled on the result of the examination will be specified in the notice issued by the Commission. Reservation will be made for candidates belonging to the Scheduled Castes, Scheduled Tribes, RBA/Social Castes/ALC and Physically Challenged categories in respect of vacancies as may be fixed by the Government.

7. *Number of attempts*.— Every candidate appearing in the examination who is otherwise eligible, shall be permitted six attempts at the examination :

Provided that this restriction on the number of attempts will not apply in the case of Scheduled Castes and Scheduled Tribes candidates who are otherwise eligible :

Provided further that the number of attempts permissible to candidates belonging to RBA, Social Castes & ALC, who are otherwise eligible, shall be nine. The relaxation will be available to the candidates who are eligible to avail of reservation applicable to such candidates :

Provided further that a physically challenged candidate will get as many attempts as are available to other non-physically challenged candidates of his or her community, subject to the condition that a physically challenged candidate belonging to the General Category shall be eligible for nine

attempts. The relaxation will be available to the physically challenged candidates who are eligible to avail of reservation applicable to such candidates.

Note :- (I) An attempt at a Preliminary Examination shall be deemed to be an attempt at the Combined Competitive Examination.

(II) If a candidate actually appears in any one paper in the Preliminary Examination, he/she shall be deemed to have made an attempt at the Examination.

(III) Notwithstanding the disqualification/cancellation of candidature, the fact of appearance of the candidate at the examination will count as an attempt.

8. *Conditions of eligibility*.- (1) In order to be eligible to compete in the examination, a candidate must satisfy the following conditions, namely :-

(i) that he is a permanent resident of the State ;

(ii) that he has attained the age of 21 years but not attained the age of 32 years on 1st January of the year in which notification inviting applications is issued by the Commission :

Provided that the upper age limit shall be 34 years, in case of the following :-

(a) Candidates belonging to Scheduled Castes/Scheduled Tribes/ RBA/Social Castes/ALC ;

(b) Candidates holding a civil post in the State in substantive capacity :

Provided that the upper age limit for physically challenged candidates shall be 35 years irrespective of the category to which such a candidate belongs.

Provided further that a candidate who has completed 02 years service on 1st January of the year in which notification inviting applications is issued by the Commission in substantive capacity to be certified by his, Head of Department, shall alone, be eligible to claim the benefit of upper age limit under clause (b) above :

Provided also that for good and sufficient reasons, to be recorded in writing, the Government may prescribe for any particular examination any other upper age limit for open category and reserved category candidates.

(iii) that he holds, notwithstanding anything to the contrary contained in the recruitment rules of various services and posts mentioned in rule (1), a Bachelor's degree of a recognized University in India or of a foreign University declared by Government in consultation with the Commission to be equivalent to the degree of a recognized Indian University :

Provided that candidates who have appeared fully in any examination on or before the last date for receipt of application forms for preliminary examination for such degree from any such University the passing of which would render them eligible to appear in the examination, but the results of their examination has not been declared, or they have not been informed of the result, will also be eligible for admission and shall be allowed to appear in the preliminary examination. All such candidates who are declared qualified by the Commission for taking the Combined Competitive (Main) Examination shall have to produce proof of passing such examination with their applications for the main examination failing which such candidates shall not be admitted to the main examination.

Explanation :ï ï Candidates who have passed the final professional M. B.B.S or any other Medical Examination but have not

completed their internship by the time of submission of their applications for the Combined Competitive (Main) Examination, will be provisionally admitted to the Examination provided they submit along with their application a copy of certificate from the concerned authority of the University/Institution that they had passed the requisite final professional medical examination. In such cases, the candidates will be required to produce at the time of their interview original degree or a certificate from the concerned competent authority of the University/ Institution that they had completed all requirements (including completion of internship) for the award of the Degree :

Provided further that in respect of candidate for J&K Police (Gazetted) Service, the candidate should possess the following physical standards also, namely :

I. For Males :

(a) Height : 165cm

(b) Chest girth minimum : 84cm Expansion 5cm

II. For Females :

(a) Height : 150cm

(b) Chest girth minimum : 79cm Expansion 5cm

III. For candidates from Leh/Kargil

A For Males :

(i) Height : 160cm

(ii) Chest girth minimum : 79cm Expansion 5cm

B. For Females :

(i) Height : 145cm

(ii) Chest girth minimum : 74cm Expansion 5cm :

Provided also the candidate(s) already holding a civil post in the State shall submit their application through Head of Office with an advance copy of the application directly to Commission and in case the Commission receives an intimation withholding permission from the employer in respect of a candidate who has applied for, or is appearing in the Combined Competitive Examination, his/her application shall be rejected and candidature cancelled. Such a candidate may, however, be allowed to appear in the examination as fresh candidate subject to the condition that the said candidate is otherwise eligible under rules.

Explanation :ï ï The expression ñCivil post in the Stateò mentioned above means a post in any departmental service under the State and includes the posts in the High Court of J&K and J&K State Legislature.

(2) Candidate must pay the fees prescribed in the Commissionôs notice.

(3) The decision of the Commission as to the eligibility or otherwise of a candidate for admission to the examination shall be final. The candidates applying for the examination should ensure that they fulfil all the eligibility conditions for admission to the Examination. Their admission at all the stages of examination for which they are admitted by the Commission viz. Preliminary Examination, Main (Written) Examination and Personality Test (Interview) will be purely provisional, subject to their satisfying the

prescribed eligibility conditions. If on verification at any time before or after the Preliminary Examination, Main (Written) Examination and Personality Test (Interview), it is found that they do not fulfil any of the eligibility conditions, their candidature for the examination will be cancelled by the Commission.

(4) No candidate will be admitted to the Preliminary/ Main Examination unless he holds a certificate of admission for the Examination.

(5) No request for withdrawal of candidature received from a candidate after he has submitted his application will be entertained under any circumstances.

9. *Documents to be furnished by the candidates for the Combined Competitive (Preliminary) Examination*.ï ï A candidate shall not be required to submit any certificate relating to his/her age, educational qualification, certificate of belonging to reserved category and holding of a civil post in the State, at the time of filling his/her application (OMR) form for the Combined Competitive (Preliminary) Examination. The admission to the preliminary examination shall be purely provisional and if on verification at any stage, it is found that the candidate has claimed eligibility for such examination by misrepresentation, concealment of any material fact(s) or impersonation or fraud, his or her candidature shall be cancelled and he/she will be liable to prosecution/disciplinary action by the Commission.

10. *Securing candidature by illegal means*.ï ï A candidate who is or has been declared by the Commission to be guilty of :ï ï

(i) Obtaining support for his candidature by the following means, namely :ï ï

(a) offering illegal gratification to ; or

(b) applying pressure on ; or

(c) blackmailing, or threatening to blackmail any person connected with the conduct of the examination ; or

(ii) impersonation ; or

(iii) procuring impersonation by any person; or

(iv) submitting fabricated documents or documents which have been tampered with ; or

(v) making statements which are incorrect or false or suppressing material information ; or

(vi) resorting to the following means in connection with his candidature for the examination, namely :

(a) obtaining copy of question paper through improper means ;

(b) finding out the particulars of the persons connected with secret work relating to the examination ;

(c) influencing the examiners ; or

(vii) using unfair means during the examination ; or

(viii) writing obscene matter or drawing obscene sketches in the scripts ; or

(ix) misbehaving in the examination hall including tearing of the scripts, provoking fellow examinees to boycott examination, creating a disorderly scene and the like ; or

(x) harassing or doing bodily harm to the staff employed by the Commission for the conduct of their examination ; or

(xi) being in possession of or using any mobile phone, pager or any electronic equipment or device or any other equipment capable of being used as a communication device during the examination ; or

(xii) violating any of the instructions issued to candidates along with their admission certificates permitting them to take the examination ; or

(xiii) attempting to commit or, as the case may be, abetting the commission of all or any of the acts specified in the foregoing clauses ; may in addition to rendering himself liable to criminal prosecution, be liable :ï ï

(a) to be disqualified by the Commission from the Examination for which he is a candidate ; and/or

(b) to be debarred either permanently or for a specified period :ï ï

(i) by the Commission, from any examination or selection held by them ;

(ii) by the State Government from any employment under them ; and

(c) if he is already in service under Government to disciplinary action under the appropriate rules :

Provided that no penalty under this rule shall be imposed except after :ï ï

(i) giving the candidate an opportunity of making such representation in writing as he may wish to make in that behalf ; and

(ii) taking the representation, if any, submitted by the candidate within the period allowed to him into consideration.

11. *Seeking reservations*.ï ï Candidates seeking reservation/ relaxation benefits available for SC/ST/RBA/Social Castes/ALC/Physically

Challenged Candidates must ensure that they are entitled to such reservation /relaxation as per eligibility prescribed in the Rules. They should also be in possession of all the requisite certificates in the prescribed format in support of their claim as stipulated in the Rules for such benefits, and these certificates should be dated earlier than the due date (closing date) of the application of Combined Competitive (Preliminary) Examination.

12. *Documents to be furnished by the candidates for the Combined Competitive (Main) Examination*.ï ï Besides furnishing the documents that may be required by the Commission, the applications for the main examination shall be accompanied by attested copies of the following certificates :ï ï

(a) Permanent resident of the State ;

(b) Academic qualification ;

(c) Age and Character ;

(d) Category Certificate, in case of candidates belonging to any reserved category.

Note :ï ï (i) No certificate except the Matriculation certificate or an equivalent certificate thereto on the date of the submission of the application shall be admitted as proof of age and no subsequent request for its change will be considered or granted.

(ii) Character certificate shall mean a certificate issued by the Head of the Education Institute or by the University last attended by the candidate or by any gazetted officer of the State. In case of a candidate already in Government Service, the Character certificate shall mean a certificate issued by his Controlling Officer.

(iii) A candidate will be eligible to get the benefit of reservation under a particular reserved category indicated by him in his/

her application form for Combined Competitive (Preliminary) Examination. If a candidate indicates in his/her application form for Combined Competitive (Preliminary) Examination that he/she belongs to General category but subsequently writes to the Commission to change his/her category to a reserved one, such request shall not be entertained by the Commission. Similar principle will be followed for physically challenged categories also.

Explanation :- While the above principle will be followed in general, there may be a few cases where there was a little gap (say 2-3 months) between the issuance of a Government Notification enlisting a particular community in the list of any of the reserved communities and the date of submission of the application by the candidate. In such cases, the request of change of community from general to reserved may be considered by the Commission on merit. In case of a candidate unfortunately becoming physically challenged during the course of the examination, the candidate should produce valid documents to enable the Commission to take a decision in the matter on merit :

Provided that the application forms submitted either for the Combined Competitive (Preliminary) or Main Examination, incomplete in any manner shall be rejected without notice to the candidate(s). However, the Commission shall notify the list of such candidates whose candidature is rejected on account of incomplete forms.

13. *Examination*.- The Combined Competitive Examination shall comprise of two successive stages :-

(i) Combined Competitive (Preliminary) Examination (Objective Type) for the selection of candidates for Main Examination ; and

(ii) Combined Competitive (Main) Examination (Written and Interview) for the selection of candidates for the various services and posts.

14. *Preliminary Examination*.ï ï (1) The Preliminary Examination will consist of two papers of objective type (multiple choice questions) and carry a maximum of 400 marks as set out in part (A) of Appendix-I, as per the detailed syllabus in Appendix-II (Part-A). This examination is meant to serve as a screening test only. The marks obtained in the Preliminary Examination shall count only for short-listing of the candidates for the Main examination.

(2) Candidates who obtain such minimum qualifying marks in the General Studies Paper-I of Preliminary Examination as may be fixed by the Commission at their discretion and a minimum of 33% marks in General Studies Paper-II of Combined Competitive (Preliminary) Examination shall be admitted to the Main Examination. The Commission will draw a list of candidates to be qualified for Combined Competitive (Main) Examination based on the criterion of minimum qualifying marks of 33% in General Studies Paper-II of Combined Competitive (Preliminary) Examination and total qualifying marks of General Studies Paper-I of Combined Competitive (Preliminary) Examination as may be determined by the Commission. Questions pertaining to the State of J&K may also be asked in Paper I of the Combined Competitive (Preliminary) Examination.

(3) There will be negative marking for incorrect answers (as detailed below) for all questions :ï ï

(i) There are four alternatives for the answers to every question. For each question for which a wrong answer has been given by the candidate, one-third (0.33) of the marks assigned to that question will be deducted as penalty ;

(ii) If a candidate gives more than one answer, it will be treated as a wrong answer even if one of the given answers happen

to be correct and there will be same penalty as above for that question ;

(iii) If a question is left blank i.e. no answer is given by the candidate, there will be no penalty for that question.

(4) The number of candidates to be admitted to the Main Examination shall be, as far as practicable, 1/3rd of the total number of candidates who appeared in the preliminary examination or twenty five times the total number of vacancies to be filled in the various services and posts, whichever is lower :

Provided that the Commission will draw a list of candidates qualified for Combined Competitive (Main) Examination based on the total qualifying marks, as may be determined by the Commission, at their discretion :

Provided further that only those candidates who are declared by the Commission to have qualified in the Preliminary Examination in the year will be eligible for admission to the Main Examination of that year provided they are otherwise eligible for admission to the Main Examination.

15. *Main Examination*.— (1) The Main Examination shall consist of written examination and a Personality Test (Interview). The written examination will consist of eight (8) papers of conventional essay type in the papers set out in part (B) of Appendix-I as per the detailed syllabus in Appendix-II (part B), out of which one (01) paper will be of qualifying nature :

Provided the Government, in consultation with the Commission, may revise or update the syllabi for the Combined Competitive Examination from time to time.

(2) Candidates who obtain such minimum qualifying marks in the written part of the Main Examination as may be fixed by the Commission at their discretion, in any or all the papers (Paper I to Paper VII) shall be summoned by them for an interview for a Personality Test, vide part 'C' of Appendix-I.

(3) A candidate who fails to secure such minimum number of marks as are fixed by the Commission in their discretion in one or more than one paper, shall, however, not be eligible to be called for Personality Test (interview).

(4) The number of candidates to be summoned for the Personality Test (interview) will not be more than thrice the number of vacancies to be filled. The Personality Test (interview) will carry 250 marks (with no minimum qualifying marks). Failure to appear in the interview shall render a candidate ineligible for being recommended for appointment notwithstanding the marks obtained by him in the written examination.

(5) The candidates shall be short-listed for interview on the basis of overall merit obtained by them in the Main Examination irrespective of the category(ies) to which he/she/they belong :

Provided that if the number of candidates belonging to any reserved category, who qualify for the interview on the basis of the above short-listing criteria, falls short of upto three times the number of vacancies reserved for such a category, the Commission shall call the candidates belonging to such category over and above the number short-listed for interview.

16. *Merit List*.ï ï (1) Marks thus obtained by the candidates in the Main Examination (written part as well as interview) would determine the final order of merit. Candidates shall be allotted to the various services keeping in view their inter-se merit in the examination and the preferences expressed by them for the various services and posts at the time of his/her submission of the application form for the main examination. The allotment of candidates to various services shall be made by the Commission in accordance with the rules/regulations in force as applicable to the respective services at the time of making such allotment and the provisions relating to reservation of posts and appointments for Scheduled Castes, Scheduled

Tribes/RBA/Social Castes/ALC for the time being in force in the State, which shall be strictly adhered to :

Provided that a candidate belonging to a reserved category, though not qualifying by the standard prescribed by the Commission may be declared suitable for appointment thereto by reduced standards with due regard to the maintenance of efficiency in administration, and recommended for appointment to vacancies reserved for members of such class in that service :

Provided also that physically challenged candidates shall be considered for selection in the services and against the posts identified for their respective categories in terms of ñThe Jammu and Kashmir Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Rules, 2003ò and in accordance with their merit-cum-preference, if otherwise found suitable for selection. The eligibility for availing reservation against the vacancies reserved for the physically challenged persons shall be the same as prescribed in ñThe Jammu and Kashmir Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1998ò read with Government Order No. 147-SW of 2014 dated 17-06-2014 or such other Government Order/Circular instructions, as applicable at the relevant point of time :

Provided further that the minimum qualifying marks as specified herein above may be relaxable at the discretion of the Commission in favour of physically challenged candidates in order to fill up the vacancies reserved for them.

(2) The form and manner of communication of the results of the examination to the individual candidates shall be decided by the Commission in their discretion.

17. *Medical fitness*.ïï A candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the discharge of his duties as an officer of the service. A candidate who after

such medical examination as Government may prescribe is found not to satisfy these requirements will not be recommended by the Commission for appointment. The medical examination shall be conducted by the Commission before forwarding the select list to the government in accordance with the rules:

Provided that Medical Board shall intimate the nature and degree of disability of physically challenged candidate in terms of ñThe Jammu and Kashmir Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1998ò and Rules made thereunder as amended from time to time with specific recommendation, if any, in respect of each of such candidate(s) for appointment to various posts through the Combined Competitive Examination :

Provided further that Government may constitute a Special Medical Board with experts in the area for conducting the medical examination of Physically Challenged candidates.

Explanation :ï ï Instructions to appear before Medical Board shall not be deemed to mean that a candidate for direct recruitment if found fit is necessarily given an appointment. The medical examination will be conducted by a Medical Board to be arranged by the Commission in accordance with Appendix-III for the candidates for J&K Police (Gazetted) Service and Appendix-IV for other candidates. The candidates will have to pay a fee as prescribed from time to time to the Medical Board.

18. *Determination of order of merit in the event of a tie*.ï ï In the event of a tie, the order of merit shall be determined in accordance with the highest marks secured in the Personality Test (interview). Should the marks in the Personality Test (interview) Test of the candidates be also equal, the order of merit shall be decided in accordance with the highest marks obtained by such candidates in the aggregate of the compulsory paper. However, in case the marks obtained in compulsory papers are also equal, the order of

merit shall be determined in accordance with the marks obtained in General Studies Papers. Similarly, if the marks obtained in General Studies Papers be also equal, then the order of merit shall be determined in descending order of the date of birth of the candidates.

19. *Record of satisfaction by the Government.* Success in the examination confers no right to appointment unless Government is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects for appointment to the service.

20. *Repeal and savings.* (1) All rules corresponding to these rules including SRO-387 dated 1st of December 2008, shall in so far they are inconsistent with these rules, stand repealed.

(2) Notwithstanding such repeal, any order made or action taken under the provisions of the rules so repealed shall be deemed to have been made or taken under the corresponding provisions of these rules.

By order of the Government of Jammu and Kashmir.

(Sd.) KHURSHID AHMED, IAS,

Commissioner/Secretary to the Government,
General Administration Department.

APPENDIX I

SCHEME AND SUBJECTS FOR THE PRELIMINARY AND MAIN EXAMINATION

A. Preliminary Examination :

The Examination shall comprise of two papers of 200 marks each.

Note :ï ï (i) Both the question papers will be of the objective type (multiple choice questions) ;

(ii) The General Studies Paper-II of the Combined Competitive (Preliminary) Examination will be a qualifying paper with minimum qualifying marks fixed at 33% ;

(iii) The question papers will be set in English :

(iv) Each paper will be of two hours duration. Blind candidates and the candidates with Locomotor Disability and Cerebral Palsy where dominant (writing) extremity is affected to the extent of slowing the performance or function (minimum of 40% impairment) will however ; be allowed an extra time of twenty minutes per hour for each paper.

B. Main Examination :

1. The written examination will consist of the following papers :ð

Qualifying Paper :

English	300 Marks

Papers to be counted for merit :

Paper-I

Essay	250 Marks

Paper-II	
General Studies-I	250 Marks
(Indian Heritage and Culture, History and Geography of the World and Society)	
Paper-III	
General Studies -II	250 Marks
(Governance, Constitution, Polity, Social Justice and International relations)	
Paper-IV	
General Studies-III	250 Marks
(Technology, Economic Development, Bio-diversity, Environment, Security and Disaster Management)	
Paper-V	
General Studies-IV	250 Marks
(Ethics, Integrity and Aptitude)	
Paper-VI	
Optional Subject - Paper -I	250 Marks
Paper-VII	
Optional Subject - Paper-II	250 Marks
Sub-Total (Written test)	1750 Marks
Personality Test (interview)	250 Marks
Grand Total :	**2000 Marks**

Note :ï ï (i) The paper on English will be of Matriculation or equivalent standard and will be of qualifying nature. The marks obtained in this paper will not be counted for ranking ;

(ii) Evaluation of the papers, namely, óEssayô, óGeneral Studiesô and Optional Subject of all the candidates would be done simultaneously along with evaluation of their qualifying paper on English but the papers on óEssayô, General Studies and Optional Subject of only such candidates will be taken cognizance of who obtain 25% marks in óEnglishô as minimum qualifying standard in this qualifying paper ;

(iii) Marks obtained by the candidates for the Paper I-VII only will be counted for merit ranking. However, the Commission will have the discretion to fix qualifying marks in any or all of these papers.

2. Candidates may choose any one of the optional subjects from amongst the list of the subjects given below :ï ï

(1) Agriculture ;

(2) Animal Husbandry and Veterinary Science ;

(3) Anthropology ;

(4) Botany ;

(5) Chemistry ;

(6) Civil Engineering ;

(7) Commerce and Accountancy ;

(8) Economics ;

(9) Electrical Engineering ;

(10) Geography ;

(11) Geology ;

(12) History ;

(13) Law ;

(14) Management ;

(15) Mathematics ;

(16) Mechanical Engineering ;

(17) Medical Science ;

(18) Philosophy ;

(19) Physics ;

(20) Political Science and International Relations ;

(21) Psychology ;

(22) Public Administration ;

(23) Sociology ;

(24) Statistics ;

(25) Zoology ;

(26) Literature of any one of the following languages :

Arabic, Dogri, English, Hindi, Kashmiri, Persian, Punjabi, Sanskrit and Urdu.

Note :ï ï I. The question papers of the examination will be of conventional (essay) type.

II. Each paper will be of three hours duration.

III. The details of the syllabi are set out in Appendix-II.

C. Personality Test (Interview) :

1. The candidate will be interviewed by a panel of Members of the Commission who will have before them a record of his/her career. He/she will be asked questions on matters of general interest. The object of the interview is to assess the personal suitability of the candidate for a career in public service. The interview test is intended to judge the mental calibre of a candidate. In broad terms, this is really an assessment of not only his intellectual qualities but also social traits and his interest in current affairs. Some of the qualities to be judged are mental alertness, critical powers of assimilation, clear and logical exposition, balance of judgement, variety and depth of interest, ability for social cohesion and leadership, intellectual and moral integrity.

2. The Commission shall also be assisted during the interview by Expert(s) in Behavioural Sciences and Public Administration as may be selected/nominated by the Chairman of the Commission.

3. The technique of the interview is not that of a strict cross-examination but of a natural, though directed and purposive conversation which is intended to reveal the mental qualities of the candidate.

4. The interview test is not intended to be a test either of the specialized or general knowledge of the candidates which has been already tested through their written papers. Candidates are expected to have taken an intelligent interest not only in their special

subjects of academic study but also in the events which are happening around them both within and outside their own State or Country as well as in modern currents of thought and in new discoveries which should rouse the curiosity of well educated youth.

GENERAL INSTRUCTIONS FOR PRELIMINARY AS WELL AS MAIN EXAMINATION :

1. It is mandatory for the candidate to appear in both the papers of Combined Competitive (Preliminary) Examination for the purpose of evaluation. Therefore, a candidate will be disqualified in case he/she does not appear in both the papers of Combined Competitive (Preliminary) Examination.

2. Candidates must write the papers in their own hand. In no circumstances, they will be allowed the help of a scribe to write the answers for them. However, blind candidates and the candidates with Locomotor Disability and Cerebral Palsy where dominant (writing) extremity is affected to the extent of slowing the performance or function (minimum of 40% impairment) will be allowed to write the examination with the help of a scribe in both the Combined Competitive (Preliminary) as well as in the Combined Competitive (Main) Examination.

3. Compensatory time of twenty minutes per hour shall be permitted for the Blind candidates and candidates with Locomotor Disability and Cerebral Palsy where dominant (writing) extremity is affected to the extent of slowing the performance or function (minimum of 40% impairment) in both the Combined Competitive (Preliminary) as well as in the Combined Competitive (Main) Examination.

4. The eligibility conditions of a scribe, his/ her conduct inside the examination hall and the manner in which and extent to which he/ she can help the blind candidate in writing the Combined

Competitive Examination shall be governed by the instructions issued by the Public Service Commission in this regard. Violation of all or any of the said instructions shall entail the cancellation of the candidature of the blind candidate in addition to any other action that the Public Service Commission may take against the scribe.

5. For purpose of these rules, the candidate shall be deemed to be a blind candidate if the percentage of visual impairment is forty per cent (40%) or more. The criteria for determining the percentage of visual impairment shall be as follows :

All with corrections

	Better eye	Worse eye	Percentage
1	2	3	4
Category O	6/9-6/18	6/24 to 6/36	20%
Category I	6/18-6/36	6/60 to nil	40%
Category II	6/60-4/60 or field of vision 10°-20°	3/60 to nil	75%
Category III	3/60-1/60 or field of vision 10°	F. C. at 1 ft. to nil	100%
Category IV	F. C. at 1 ft to Nil field of vision 100°	F. C. at 1 ft to Nil field of vision 100°	100%
One-eyed Person	6/6	F. C. at 1 ft to Nil	30%

6. For availing of the concession admissible to a blind candidate, the candidate concerned shall produce a certificate in the prescribed proforma from a Medical Board constituted by the Government along with their application for the Main Examination.

7. The concession admissible to blind candidates shall not be admissible to those suffering from Myopia.

8. The Commission have discretion to fix qualifying marks in any or all the subjects of the examination.

9. If a candidateôs handwriting is not easily legible, a deduction will be made on this account from the total marks otherwise accruing to him.

10. Marks will not be allotted for mere superficial knowledge.

11. Credit will be given for orderly, effective and exact expression combined with due economy of words in all subjects of the examination.

12. In the question papers, wherever required, SI units will be used.

13. Candidates should use only International form of Indian numerals (i. e. 1, 2, 3, 4, 5, 6 etc.) while answering question papers.

14. Candidates will be allowed the use of Scientific (Non-Programmable type) Calculators at the conventional (Essay) type examination of the Public Service Commission. Programmable type calculators will, however, not be allowed and the use of such calculators shall tantamount to resorting to unfair means by the candidates. Loaning or interchanging of calculators in the Examination Hall is not permitted.

    It is also important to note that candidates are not permitted to use calculators for answering objective type papers (Test Booklets). They should not, therefore, bring the same inside the Examination Hall.

APPENDIX II

SYLLABI FOR THE EXAMINATION

PART-A

Preliminary Examination

Paper I-(200 marks) **Duration : Two hours**

- Current events of National and International importance ;
- History of India and Indian National Movement ;
- Indian and World Geography-Physical, Social, Economic Geography of India and the world ;
- Indian Polity and Governance-Constitution, Political System, Panchayati Raj, Public Policy, Rights Issues etc. ;
- Economic and Social Development-Sustainable Development, Poverty, Inclusion, Demographics, Social Sector Initiatives etc. ;
- General issues on Environmental ecology, Bio-diversity and Climate Change-that do not require subject specialization ;
- General Science.

Note :ï ï Questions pertaining to the State of Jammu and Kashmir may also be asked in this paper.

Paper II-(200 marks) **Duration : Two hours**

- Comprehension ;
- Interpersonal skills including communication skills ;
- Logical reasoning and analytical ability ;
- Decision-making and problem-solving ;
- General mental ability ;

- Basic numeracy (numbers and their relations, orders of magnitude etc.-Class X level), Data interpretation (charts, graphs, tables, data sufficiency etc.-Class X level).

Note 1 :ï ï Paper-II of the Combined Competitive (Preliminary) Examination will be a qualifying paper with minimum qualifying marks fixed at 33%.

Note 2 :ï ï The questions will be of multiple choice, objective type.

Note 3 :ï ï It is mandatory for the candidate to appear in both the Papers of Combined Competitive (Preliminary) Examination for the purpose of evaluation. Therefore, a candidate will be disqualified in case he/she does not appear in both the papers of Combined Competitive (Preliminary) Examination.

PART-B

MAIN EXAMINATION

The main Examination is intended to assess the overall intellectual traits and depth of understanding of candidates rather than merely the range of their information and memory.

The nature and standard of questions in the General Studies papers (Paper II to Paper V) will be such that a well-educated person will be able to answer them without any specialized study. The questions will be such as to test a candidate's general awareness of a variety of subjects, which will have relevance for a career in Civil Services. The questions are likely to test the candidate's basic understanding of all relevant issues, and ability to analyze, and take a view on conflicting socio- economic goals, objectives and demands. The candidates must give relevant, meaningful and succinct answers.

The scope of the syllabus for optional subject papers (Paper VI and Paper VII) for the examination is broadly of the honours degree level i. e. a level higher than the bachelorsô degree and lower than the mastersô degree.

In the case of Engineering, Medical Science and law, the level corresponds to the bachelorsô degree.

The syllabi of the papers included in the scheme of Combined Competitive (Main) Examination is given as follows :ð

QUALIFYING PAPER ON ENGLISH

The aim of the paper is to test the candidate's ability to read and understand serious discursive prose, and to express his ideas clearly and correctly.

The pattern of questions would be broadly as follows :ï ï

i. Comprehension of given passages ;

ii. Precis Writing ;

iii. Usage and Vocabulary ;

iv. Short Essays.

(The paper will be of Matriculation or equivalent standard and will be of qualifying nature only. The marks obtained in this paper will not be counted for final ranking.)

PAPER-I

Essay : Candidates may be required to write essays on multiple topics. They will be expected to keep closely to the subject of the essay to arrange their ideas in orderly fashion, and to write concisely. Credit will be given for effective and exact expression.

PAPER-II

General Studies- I : Indian Heritage and Culture, History and Geography of the World and Society :ï ï

- Indian Polity and Governance-Constitution, Political System, Panc Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

- Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.
- The Freedom Struggle-its various stages and important contributors/contributions from different parts of the country.
- Post-independence consolidation and reorganization within the country.
- History of the world will include events from 18th century such as industrial revolution, world wars, redrawal of national boundaries, colonization, decolonization, political philosophies like communism, capitalism, socialism etc.- their forms and effect on the society.
- Salient features of Indian Society, Diversity of India.
- Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.
- Effects of globalization on Indian society.
- Social empowerment, communalism, regionalism and secularism.
- Salient features of worldôs physical geography.
- Distribution of key natural resources across the world (including South Asia and the Indian subcontinent) ; factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
- Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, Cyclone etc., geographical features and their location- changes in critical geographical features (including water bodies and ice-caps) and in flora and fauna and the effects of such changes.

PAPER-III

General Studies-II : Governance, Constitution, Polity, Social Justice and International relations :ï ï

- Indian Constitution- historical under pinnings, evolution, features, amendments, significant provisions and basic structure.
- Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.
- Separation of powers between various organs dispute redressal mechanisms and institutions.
- Comparison of the Indian constitutional scheme with that of other countries.
- Parliament and State Legislatures - structure, functioning, conduct of business, powers and privileges and issues arising out of these.
- Structure, organization and functioning of the Executive and the Judiciary Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.
- Salient features of the Representation of Peopleôs Act.
- Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.
- Statutory, regulatory and various quasi-judicial bodies.
- Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
- Development processes and the development industry- the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

- Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.
- Issues relating to development and management of Social Sector/ Services relating to Health, Education, Human Resources.
- Issues relating to poverty and hunger.
- Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations, and potential ; citizens charters, transparency and accountability and institutional and other measures.
- Role of civil services in a democracy.
- India and its neighborhood-relations.
- Bilateral, regional and global groupings and agreements involving India and/or affecting Indiaôs interests.
- Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.
- Important International institutions, agencies and fora- their structure, mandate.

PAPER-IV

General Studies-III : Technology, Economic Development, Bio-diversity, Environment, Security and Disaster Management :

- Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.
- Inclusive growth and issues arising from it.
- Government Budgeting.

- Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints, e-technology in the aid of farmers.
- Issues related to direct and indirect farm subsidies and minimum support prices, Public Distribution System- objectives, functioning, limitations, revamping, issues of buffer stocks and food security, Technology missions; economics of animal-rearing.
- Food processing and related industries in India- scope and significance, location, upstream and downstream requirements, supply chain management.
- Land reforms in India.
- Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
- Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
- Investment models.
- Science and Technology- developments and their applications and effects in everyday life.
- Achievements of Indians in science and technology ; indigenization of technology and developing new technology.
- Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.
- Conservation, environmental pollution and degradation, environmental impact assessment.
- Disaster and disaster management.
- Linkages between development and spread of extremism.

- Role of externaleh state and non-state actors in creating challenges to internal security.
- Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.
- Security challenges and their management in border areas; linkages of organized crime with terrorism.
- Various Security forces and agencies and their mandate.

PAPER-V

General Studies-IV : Ethics, Integrity, and Aptitudeï ï

This paper will include questions to test the candidates' attitude and approach to issues relating to integrity, probity in public life and his problem solving approach to various issues and conflicts faced by him in dealing with society. Questions may utilize the case study approach to determine these aspects. The following broad areas will be covered.

- Ethics and Human Interface: Essence, determinants and consequences of Ethics in human actions; dimensions of ethics; ethics in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators; role of family, society and educational institutions in inculcating values.
- Attitude: content, structure, function; its influence and relation with thought and behavior; moral and political attitudes; social influence and persuasion.
- Aptitude and foundational values for Civil Service, integrity, impartiality and non-partisanship, objectivity, dedication to public

service, empathy, tolerance and compassion towards the weaker sections.

- Emotional intelligence-concepts, and their utilities and application in administration and governance.
- Contributions of moral thinkers and philosophers from India and world.
- Public/Civil service values and Ethics in Public administration: Status and problems; ethical concerns and dilemmas in government and private institutions; laws, rules, regulations and conscience as sources of ethical guidance; accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding ; corporate governance.
- Probity in Governance: Concept of public service; Philosophical basis of governance and probity; Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
- Case Studies on above issues.

PAPER-VI & PAPER-VII

Optional Subject Paper I & II

Candidates may choose any optional subject from amongst the list of the subject in Appendix-I. The detailed syllabus for each optional subject is given below:

AGRICULTURE

PAPER-I

Ecology and its relevance to man, natural resources, their sustainable management and conservation. Physical and social environment as factors

of crop distribution and production. Agro ecology; cropping pattern as indicators of environments. Environmental pollution and associated hazards to crops, animals and humans. Climate change-International conventions and global initiatives. Green house effect and global warming. Advance tools for ecosystem analysis- Remote Sensing (RS) and Geographic Information Systems (GIS).

Cropping patterns in different agro-climatic zones of the country. Impact of high-yielding and short-duration varieties on shifts in cropping patterns. Concepts of various cropping and farming systems. Organic and Precision farming. Package of practices for production of important cereals, pulses, oil seeds, fibres, sugar, commercial and fodder crops.

Important features, and scope of various types of forestry plantations such as social forestry, agro-forestry, and natural forests: Propagation of forest plants. Forest products. Agro-forestry and value addition. Conservation of forest flora and fauna.

Weeds, their characteristics, dissemination and association with various crops ; their multiplications; cultural, biological, and chemical control of weeds.

Soil-physical, chemical and biological properties. Processes and factors of soil formation. Soils of India. Mineral and organic constituents of soils and their role in maintaining soil productivity. Essential plant nutrients and other beneficial elements in soils and plants. Principles of soil fertility, soil testing and fertilizer recommendations, integrated nutrient management Biofertilizers. Losses of nitrogen in soil, nitrogen-use efficiency in submerged rice soils, nitrogen fixation in soils. Efficient phosphorus and potassium use. Problem soils and their reclamation. Soil factors affecting greenhouse gas emission.

Soil conservation, integrated watershed management. Soil erosion and its management. Dry land agriculture and its problems. Technology for stabilising agriculture production in rainfed areas.

Water-use efficiency in relation to crop production, criteria for scheduling irrigations, ways and means of reducing run-off losses of irrigation water. Rainwater harvesting. Drip and sprinkler irrigation. Drainage of water-logged soils, quality of irrigation water, effect of industrial effluents on soil and water pollution. Irrigation projects in India.

Farm management, scope, importance and characteristics, farm planning. Optimum resource use and budgeting. Economics of different types of farming systems. Marketing management strategies for development, market intelligence. Price fluctuations and their cost; role of co-operatives in agricultural economy; types and systems of farming and factors affecting them. Agricultural price policy. Crop Insurance.

Agricultural extension, its importance and role, methods of evaluation of extension programmes, socio-economic survey and status of big, small and marginal farmers and landless agricultural labourers; Training programmes for extension workers. Role of Krishi Vigyan Kendra's (KVK) in dissemination of Agricultural technologies. Non-Government Organisation (NGO) and self-help group approach for rural development.

PAPER-II

Cell structure, function and cell cycle. Synthesis, structure and function of genetic material. Laws of heredity. Chromosome structure, chromosomal aberrations, linkage and cross-over, and their significance in recombination breeding. Polyploidy, euploids and aneuploids. Mutation-and their role in crop improvement. Heritability, sterility and incompatibility, classification and their application in crop improvement. Cytoplasmic inheritance, sex-linked, sex-influenced and sex-limited characters.

History of plant breeding. Modes of reproduction, selfing and crossing techniques. Origin, evolution and domestication of crop plants, center of origin, law of homologous series, crop genetic resources-conservation and utilization. Application of principles of plant breeding, improvement of crop plants. Molecular markers and their application in plant improvement. Pure-line selection, pedigree, mass and recurrent selections, combining ability, its

significance in plant breeding. Heterosis and its exploitation. Somatic hybridization. Breeding for disease and pest resistance. Role of interspecific and intergeneric hybridization. Role of genetic engineering and biotechnology in crop improvement Gernetically modified crop plants.

Seed production and processing technologies. Seed certification, Seed testing and storage. DNA finger printing and seed registration. Role of public and private sectors in seed production, and marketing. Intellectual Property Rights (IPR) issues, WTO issues and its impact on Agriculture.

Principles of Plant Physiology with reference to plant nutrition, absorption, translocation and metabolism of nutrients. Soil-water-plant relationship.

Enzymes and plant pigments; photosynthesis-modern concepts and factors affecting the process, aerobic and anaerobic respiration; C3, C4 and CAM mechanisms. Carbohydrate, protein and fat metabolism. Growth and development ; photoperiodism and vernalization. Plant growth substances and their role in crop production. Physiology of seed development and germination; dormancy. Stress physiology-draught, salt and water stress.

Major fruits, plantation crops, vegetables, spices and flower crops. Package practices of major horticultural crops. Protected cultivation and high tech horticulture. Post-harvest technology and value addition of fruits and vegetables. Landscaping and commercial floriculture. Medicinal and aromatic plants. Role of fruits and vegetables in human nutrition.

Diagnosis of pests and diseases of field crops, vegetables, orchard and plantation crops and their economic importance. Classification of pests and diseases and their management. Intergrated pest and diseases management. Storage pests and their management. Biological control of pests and diseases. Epidemiology and forecasting of major crop pests and diseases. Plant quarantine measures. Pesticides, their formulation and modes of action.

Food production and consumption trends in India. Food security and growing population-vision 2020. Reasons for grain surplus. National and International food policies. Production, procurement, distribution constraints. Availability of foodgrains, per capita expenditure on food. Trends in poverty, Public Distribution System and Below Poverty Line population, Targeted Public Distribution System (PDS), policy implementation in context to globalization. Processing constraints. Relation of food production to National Dietary Guidelines and food consumption pattern. Food based dietary approaches to eliminate hunger. Nutrient deficiency-Micro nutrient deficiency : Protein Energy Malnutrition or Protein Calorie Malnutrition (PEM or PCM), Micronutrient deficiency and HRD in context of work capacity of women and children. Food grain productivity and food security.

ANIMAL HUSBANDRY AND VETERINARY SCIENCE

PAPER-I

1. Animal Nutrition :

1.1 Partitioning of food energy within the animal. Direct and indirect calorimetry. Carbon-nitrogen balance and comparative slaughter methods. Systems for expressing energy value of foods in ruminants, pigs and poultry. Energy requirements for maintenance, growth, pregnancy, lactation, egg, wool, and meat production.

1.2 Latest advances in protein nutrition. Energy protein inter-relationships. Evaluation of protein quality. Use of NPN compounds in ruminant diets. Protein requirements for maintenance, growth, pregnancy, lactation, egg, wool and meat production.

1.3 Major and trace minerals-Their sources, physiological functions and deficiency symptoms. Toxic minerals. Mineral interactions. Role of fatsoluble and water-soluble vitamins in the body, their sources and deficiency symptoms.

1.4 Feed additives-methane inhibitors, probiotics, enzymes, antibiotics, hormones, oligosaccharides, antioxidants, emulsifiers, mould inhibitors, buffers etc. Use and abuse of growth promoters like harmones and antibiotics-latest concepts.

1.5 Conservation of fodders. Storage of feeds and feed ingredients. Recent advances in feed technology and feed processing. Anti-nutritional and toxic factors present in livestock feeds. Feed analysis and quality control. Digestibility trials-direct, indirect and indicator methods. Predicting feed intake in grazing animals.

1.6 Advances in ruminant nutrition. Nutrient requirements. Balanced rations. Feeding of calves, pregnant, work animals and breeding bulls. Strategies for feeding milch animals during different stages of lactation cycle. Effect of feeding on milk composition. Feeding of goats for meat and milk production. Feeding of sheep for meat and wool production.

1.7 Swine Nutrition. Nutrient requirements. Creep, starter, grower and finisher rations. Feeding of pigs for lean meat production. Low cost rations for swine.

1.8 Poultry nutrition. Special features of poultry nutrition. Nutrient requirements for meat and egg production. Formulation of rations for different classes of layers and broilers.

2. Animal Physiology :

2.1 Physiology of blood and its circulation, respiration; excretion. Endocrine glands in health and disease.

2.2 Blood constituents.ï ï Properties and functions-blood cell formation-Haemoglobin synthesis and chemistry-plasma proteins production, classification and properties, coagulation of blood ; Haemorrhagic disorders-anti-coagulants-blood groups-Blood volume-Plasma expanders-Buffer systems in

blood. Biochemical tests and their significance in disease diagnosis.

2.3 Circulation.ï ï Physiology of heart, cardiac cycle, heart sounds, heartbeat, electrocardiograms. Work and efficiency of heart-effect of ions on heart function-metabolism of cardiac muscle, nervous and chemical regulation of heart, effect of temperature and stress on heart, blood pressure and hypertension, osmotic regulation, arterial pulse, vasomotor regulation of circulation, shock. Coronary and pulmonary circulation, Blood-Brain barrier Cerebrospinal fluid-circulation in birds.

2.4 Respiration.ï ï Mechanism of respiration, Transport and exchange of gases-neural control of respiration-Chemo-receptors-hypoxia-respiration in birds.

2.5 Excretion.ï ï Structure and function of kidney-formation of urine-methods of studying renal function-renal regulation of acid-base balance : physiological constituents of urine-renal failure-passive venous congestion-Urinary secretion in chicken-Sweat glands and their function. Bio-chemical test for urinary dysfunction.

2.6 Endocrine glands.ï ï Functional disorders-their symptoms and diagnosis. Synthesis of hormones, mechanism and control of secretion-hormonal receptors-classification and function.

2.7 Growth and Animal Production.ï ï Prenatal and postnatal growth, maturation, growth curves, measures of growth, factors affecting growth, conformation, body composition, meat quality.

2.8 Physiology of Milk Production, Reproduction and Digestion.ï ï Current status of hormonal control of mammary development, milk secretion and milk ejection. Male and

Female reproductive organs, their components and functions. Digestive organs and their functions.

2.9 Environmental Physiology.ï ï Physiological relations and their regulation; mechanisms of adaptation, environmental factors and regulatory mechanisms involved in animal behaviour, climatology-various parameters and their importance. Animal ecology. Physiology of behaviour. Effect of stress on health and production.

3. Animal Reproduction :

Semen quality.-Preservation and Artificial Insemination-Components of semen, composition of spermatozoa, chemical and physical properties of ejaculated semen, factors affecting semen in vivo and in vitro. Factors affecting semen production and quality, preservation, composition of diluents, sperm concentration, transport of diluted semen. Deep freezing techniques in cows, sheep, goats, swine and poultry. Detection of oestrus and time of insemination for better conception. Anoestrus and repeat breeding.

4. Livestock Production and Management :

4.1 Commercial Dairy Farming.ï ï Comparison of dairy farming in India with advanced countries. Dairying under mixed farming and as specialized farming, economic dairy farming. Starting of a dairy farm, Capital and land requirement, organization of the dairy farm. Opportunities in dairy farming, factors determining the efficiency of dairy animal. Heard recording, budgeting cost of milk production, pricing policy; Personnel Management. Developing Practical and Economic rations for dairy cattle; supply of greens throughout the year, feed and fodder requirements of Dairy Farm. Feeding regimes for young stock and bulls, heifers and breeding animals; new trends in feeding young and adult stock; Feeding records.

4.2 Commercial meat, egg and wool production.ï ï Development of practical and economic rations for sheep, goats, pigs, rabbits and poultry. Supply of greens, fodder, feeding regimes for young and mature stock. New trends in enhancing production and management. Capital and land requirements and socio-economic concept.

4.3 Feeding and management of animals under drought, flood and other natural calamities.

5. Genetics and Animal Breeding :

5.1 History of animal genetics, Mitosis and Meiosis : Mendelian inheritance ; deviations to Mendelian genetics ; Expression of genes ; Linkage and crossing over ; Sex determination, sex influenced and sex limited characters; Blood groups and polymorphism; Chromosome aberrations; Cytoplasmic inheritance, Gene and its structure; DNA as a genetic material; Genetic code and protein synthesis; Recombinant DNA technology. Mutations, types of mutations, methods for detecting mutations and mutation rate, Transgenesis.

5.2 Population Genetics applied to Animal Breeding.ï ï Quantitative Vs. Qualitative traits; Hardy Weinberg Law ; Population Vs. Individual ; Gene and genotypic frequency; Forces changing gene frequency; Random drift and small populations; Theory of path coefficient; Inbreeding, methods of estimating inbreeding coefficient, systems of inbreeding; Effective population size; Breeding value, estimation of breeding value, dominance and epistatic deviation; Partitioning of variation; Genotype X environment correlation and genotype X environment interaction; role of multiple measurements; Resemblance between relatives.

5.3 Breeding Systems.ï ï Breeds of livestsock and Poultry. Heritability, repeatability and genetic and phenotypic

correlations, their methods of estimation and precision of estimates; Aids to selection and their relative merits; Individual, pedigree, family and within family selection; Pregnancy testing; Methods of selection ; Construction of selection indices and their uses; Comparative evaluation of genetic gains through various selection methods; Indirect selection and correlated response; Inbreeding, out breeding, upgrading, cross-breeding and synthesis of breeds; Crossing of inbred lines for commercial production; Selection for general and specific combining ability; Breeding for threshold characters. Sire index.

6. Extension :

Basic philosophy, objectives, concept and principles of extension. Different Methods adopted to educate farmers under rural conditions. Generation of technology, its transfer and feedback. Problems and constraints in transfer of technology. Animal husbandry programmes for rural development.

PAPER-II

1. Anatomy, Pharmacology and Hygiene :

1.1 Histology and Histological Techniques.ï ï Paraffin embedding technique of tissue processing and H.E. staining-Freezing microtomy-Microscopy Bright field microscope and electron microscope. Cytology-structure of cell organells and inclusions; cell division-cell types-Tissues and their classification-embryonic and adult tissues-Comparative histology of organs-Vascular, Nervous, digestive, respiratory, musculo-skeletal and urogenital systems-Endocrine glands-Integuments-sense organs.

1.2 Embryology.ï ï Embryology of vertebrates with special reference to aves and domestic mammals gametogenesis-fertilization-germ layers-foetal membranes and placentation-

types of placenta in domestic mammals-Teratology-twins and twinning-organogenesis-germ layer derivatives-endodermal, mesodermal and ectodermal derivatives.

1.3 Bovine Anatomy.ï Regional Anatomy : Paranasal sinuses of OX- surface anatomy of salivary glands. Regional anatomy of infraorbital, maxillary, mandi-buloalveolar, mental and cornnal nerve block. Regional anatomy of paravertebral nerves, pudental nerve, median, ulnar and radial nervestibial, fibular and digital nerves-Cranial nerves-structures involved in epidural anesthesia-superficial lymph nodes-surface anatomy of visceral organs of thoracic, abdominal and pelvic cavities-comparative-features of locomotor apparatus and their application in the biomechanics of mammalian body.

1.4 Anatomy of Fowl.ï ï Musculo-skeletal system-functional anatomy in relation to respiration and flying, digestion and egg production.

1.5 Pharmacology and therapeutics drugs.ï ï Cellular level of pharmacodynamics and pharmacokinetics. Drugs acting on fluids and electrolyte balance. Drugs acting on Autonomic nervous system. Modern concepts of anesthesia and dissociative anaesthetics. Autocoids. Antimicrobials and principles of chemotherapy in microbial infections. Use of hormones in therapeutics-chemotherapy of parasitic infections. Drug and economic concerns in the Edible tissues of animals-chemotherapy of Neoplastic diseases. Toxicity due to ñinsecticides, plants, metals, non-metals, zootoxins and mycotoxinsò.

1.6 Veterinary Hygiene with reference to water, air and habitation.ï ï Assessment of pollution of water, air and soil-Importance of climate in animal health-effect of environment on animal function and performance relationship between

industrialisation and animal agriculture-animal housing requirements for specific categories of domestic animals viz. pregnant cows and sows, milking cows, broiler birds-stress, strain and productivity in relation to animal habitation.

2. Animal Diseases :

2.1 Etiology, epidemiology pathogenesis, symptoms, post-moretem lesions, diagnosis, and control of infectious diseases of cattle, sheep and goat, horses, pigs and poultry.

2.2 Etiology, epidemiology, symptoms, diagnosis, treatment of production diseases of cattle, horse, pig and poultry.

2.3 Deficiency diseases of domestic animals and birds.

2.4 Diagnosis and treatment of non-specific conditions like impaction, Bloat, Diarrhoea, Indigestion, dehydration, stroke, poisioning.

2.5 Diagnosis and treatment of neurological disorders.

2.6 Principles and methods of immunisation of animals against specific diseases-hard immunity-disease free zones-ózeroô disease concept- chemoprophylaxis.

2.7 Anaesthesia.ï ï local, regional and general-prenesthetic medication. Symptoms and surgical interference in fractures and dislocation. Hernia, choking abomassal displacement-Caesarian operations. Rumenotomy-Castrations.

2.8 Disease investigation techniques.ï ï Materials for laboratory investigation-Establishment. Animal Health Centres-Disease free zone.

3. Veterinary Public Health :

3.1 Zoonoses.ï ï Classification, definition, role of animals and birds in prevalence and transmission of zoonotic diseases-occupational zoonotic diseases.

3.2 Epidemiology.ï ï Principle, definition of epidemiological terms, application of epidemiological measures in the study of diseases and disease control. Epidemiological features of air, water and food borne infections. OIE regulation, WTO, sanitary and phytosanitary measures.

3.3 Veterinary Jurisprudence.ï ï Rules and Regulations for improvement of animal quality and prevention of animal diseases-State and Central Rules for prevention of animal and animal product borne diseases-S.P. C.A.-Veterolegal cases-Certificates-Materials and Methods of collection of samples for veterolegal investigation.

4. Milk and Milk Products Technology :

4.1 Market Milk.ï ï Quality, testing and grading of raw milk. Processing, packaging, storing, distribution, marketing defects and their control. Preparation of the following milks : Pasteurized, standardized, toned, double toned, sterilized, homogenized, reconstituted, recombined and flavoured milks. Preparation of cultured milks, cultures and their management, yoghurt, Dahi, Lassi and Srikhand. Preparation of flavoured and sterilized milks. Legal standards. Sanitation requirement for clean and safe milk and for the milk plant equipment.

4.2 Milk Products Technology.ï ï Selection of raw materials, processing, storing, distributing and marketing milk products such as Cream, Butter, Ghee, Khoa, Channa, Cheese, condensed, evaporated, dried milk and baby food, lce cream and Kulfi; by-products, whey products, butter milk, lactose and casein. Testing, grading, judging milk products-BIS and Agmark specifications, legal standards, quality control nutritive properties. Packaging processing and operational control. Costing of dairy products.

5. Meat Hygiene and Technology :

5.1 Meat Hygiene

5.1.1 Ante mortem care and management of food animals, stunning, slaughter and dressing operations; abattoir requirements and designs; Meat inspection procedures and judgment of carcass meat cuts- grading of carcass meat cuts-duties and functions of Veterinarians in wholesome meat production.

5.1.2 Hygienic methods of handling production of meat.ï ï Spoilage of meat and control measures-Post-slaughter physicochemical changes in meat and factors that influence them-Quality improvement methods-Adulteration of meat and detection- Regulatory provisions in Meat trade and Industry.

5.2 Meat Technology

5.2.1 Physical and chemical characteristics of meat.ï ï Meat emulsions-Methods of preservation of meat-Curing, canning, irradiation, packaging of meat and meat products, processing and formulations.

5.3 By-products.ï ï Slaughter house by-products and their utilisation-Edible and inedible by products- Social and economic implications of proper utilisation of slaughter house by-products-Organ products for food and pharmaceuticals.

5.4 Poultry Products Technology.ï ï Chemical composition and nutritive value of poultry meat, pre-slaughter care and management. Slaughtering techniques, inspection, preservation of poultry meat and products. Legal and BIS standards. Structure composition and nutritive value of eggs Microbial spoilage. Preservation and maintenance. Marketing of poultry meat, eggs and products.

5.5 Rabbit/Fur Animal farming.-Rabbit meat production. Disposal and utilization of fur and wool and recycling of waste by products. Grading of wool.

ANTHROPOLOGY

PAPER-I

1.1 Meaning, Scope and development of Anthropology.

1.2 Relationships with other disciplines : Social Sciences, behavioural Sciences, Life Sciences, Medical Sciences, Earth Sciences and Humanities.

1.3 Main branches of Anthropology, their scope and relevance :

(a) Social-cultural Anthropology ;

(b) Biological Anthropology ;

(c) Archaeological Anthropology ;

(d) Linguistic Anthropology.

1.4 Human Evolution and emergence of Man :

(a) Biological and Cultural factors in human evolution ;

(b) Theories of Organic Evolution (Pre-Darwinian, Darwinian and Post-Darwinian) ;

(c) Synthetic theory of evolution; Brief outline of terms and concepts of evolutionary biology (Doll's rule, Cope's rule, Gause's rule, parallelism, convergence, adaptive radiation and mosaic evolution) ;

1.5 Characteristics of Primates ; Evolutionary Trend and Primate Taxonomy; Primate Adaptations; (Arboreal and Terrestrial) Primate Taxonomy; Primate Behaviour; Tertiary and Quaternary fossil primates; Living Major Primates;

Comparative Anatomy of Man and Apes; Skeletal changes due to erect posture and its implications.

1.6 Phylogenetic status, characteristics and geographical distribution of the following :

(a) Plio-preleistocene hominids in South and East Africa-Australopithecines ;

(b) Homo erectus : Africa (Paranthropus), Europe (Homo-erectus (heidelbergensis), Asia (Homoerectus javanicus, Homo erectus pekinensis ;

(c) Neanderthal man-La-chapelle-aux-saints (Classical type), Mt. Carmel (Progressive type) ;

(d) Rhodesian man ;

(e) Homo saoiens-Cromagnon, Grimaldi and Chancelede.

1.7 The biological basis of Life. The Cell, DNA structure and replication, Protein Synthesis, Gene, Mutation, Chromosomes and Cell Division.

1.8 (a) Principles of Prehistoric Archaeology. Chronology: Relative and Absolute Dating methods.

(b) Cultural Evolution-Broad Outlines of Prehistoric cultures :

(i) Paleolithic

(ii) Mesolithic

(iii) Neolithic

(iv) Chalcolithic

(v) Copper-Bronze Age

(vi) Iron Age

2.1 **The Nature of Culture**.ï ï The concept and Characteristics of culture and civilization; Ethnocentrism vis-a-vis cultural Relativism.

2.2 **The Nature of Society**.ï ï Concept of Society; Society and Culture; Social Institution; Social groups; and Social stratification.

2.3 **Marriage**.ï ï Definition and universality; Laws of marriage (endogamy, exogamy, hypergamy, hypogamy, incest taboo) ; Type of marriage (monogamy, polygamy, polyandry, group marriage). Functions of marriage; Marriage regulations (preferential, prescriptive and proscriptive); Marriage payments (bride wealth and dowry).

2.4 **Family**.ï ï Definition and universality; Family, household and domestic groups; functions of family; Types of family (from the perspectives of structure, blood relation, marriage, residence and succession); Impact of urbanization, industrialization and feminist movements on family.

2.5 **Kinship**.ï ï Consanguinity and Affinity; Principles and types of descent (Unilineal, Double, Bilateral Ambilineal); Forms of descent groups (lineage, clan, phratry, moiety and kindred); Kinship terminology (descriptive and classificatory) ; Descent, Filiation and Complimentary Filiation; Decent and Alliance.

3. **Economic Organization**.ï ï Meaning, scope and relevance of economic anthropology ; Formalist and Substantivist debate ; Principles governing production, distribution and exchange (reciprocity, redistribution and market), in communities, subsisting on hunting and gathering, fishing, swiddening, pastoralism, horticulture, and agriculture ; globalization and indigenous economic systems.

4. **Political Organization and Social Control**.ï ï Band, tribe, chiefdom, kingdom and state; concepts of power, authority and legitimacy; social control, law and justice in simple Societies.

5. **Religion**.ï Anthropological approaches to the study of religion (evolutionary, psychological and functional) ; monotheism and polytheism; sacred and profane; myths and rituals; forms of religion in tribal and peasant societies (animism, animatism, fetishism, naturism and totemism); religion, magic and science distinguished; magico-religious functionaries (priest, shaman, medicine man, sorcerer and witch).

6. **Anthropological theories :**

   (a) Classical evolutionism (Tylor, Morgan and Frazer) :ð

   (b) Historical particularism (Boas) Diffusionism (British, German and American) ;

   (c) Functionalism (Malinowski); Structural-Functionlism (Radcliffe-Brown) ;

   (d) Structuralism (Lêvi-Strauss and E. Leach) ;

   (e) Culture and personality (Benedict, Mead, Linton, Kardiner and Cora-du Bois) m;

   (f) Neo-evolutionism (Childe, White, Steward, Sahlins and Service) ;

   (g) Cultural materialism (Harris) ;

   (h) Symbolic and interpretive theories (Turner, Schneider and Geertz) ;

   (i) Cognitive theories (Tyler, Conklin) ;

   (j) Post-modernism in anthropology.

7. **Culture, Language and Communication**.ï ï Nature, origin and characteristics of language; verbal and non-verbal communication; social contex of language use.

8. **Research methods in Anthropology :**

(a) Fieldwork tradition in anthropology.ð

(b) Distinction between technique, method and methodology ;

(c) Tools of data collection : observation, interview, schedules, questionnaire, case study, genealogy, life-history, oral history, secondary sources of information, participatory methods.

(d) Analysis, interpretation and presentation of data.

9.1 **Human Genetics**.ï ï Methods and Application : Methods for study of genetic principles in man-family study (pedigree analysis, twin study, foster child, co-twin method, cytogenetic method, chromosomal and karyo-type analysis), biochemical methods, immunological methods, D.N.A. technology and recombinant technologies.

9.2 Mendelian genetics in man-family study, single factor, multifactor, lethal, sub-lethal and polygenic inheritance in man.

9.3 Concept of genetic polymorphism and selection, Mendelian population, Hardy-Weinberg law; causes and changes which bring down frequency-mutation, isolation, migration, selection, inbreeding and genetic drift. Consanguineous and non-consanguineous mating, genetic load, genetic effect of consanguineous and cousin marriages.

9.4 Chromosomes and chromosomal aberrations in man, methodology :ï ï

(a) Numerical and structural aberrations (disorders) ;

(b) Sex chromosomal aberration- Klinefelter (XXY), Turner (XO), Super female (XXX), intersex and other syndromic disorders ;

(c) Autosomal aberrations- Down syndrome, Patau, Edward and Cri-du-chat syndromes ;

(d) Genetic imprints in human disease, genetic screening, genetic counseling, human DNA profiling, gene mapping and genome study.

9.5 Race and racism, biological basis of morphological variation of non-metric and characters. Racial criteria, racial traits in relation to heredity and environment; biological basis of racial classification, racial differentiation and race crossing in man.

9.6 **Age, sex and population variation as genetic marker :**

ABO, Rh blood groups, HLA Hp, transferring, Gm, blood enzymes. Physiological characteristics-Hb level, body fat, pulse rate, respiratory functions and sensory perceptions in different cultural and socio-ecomomic groups.

9.7 **Concepts and methods of Ecological Anthropology :**

Bio-cultural Adaptations.ï ï Genetic and Non-genetic factors. Manôs physiological responses to environmental stresses: hot desert, cold, high altitude climate.

9.8 **Epidemiological Anthropology**.ï ï Health and disease. Infectious and non-infectious diseases, Nutritional deficiency related diseases.

10. **Concept of human growth and development**.ï ï Stages of growth-pre-natal, natal, infant, childhood, adolescence, maturity, senescence.

ï ï Factors affecting growth and development genetic, environmental, biochemical, nutritional, cultural and socio-economic.

ï ï Ageing and senescence. Theories and observations.

ï ï Biological and chronological longevity. Human physique and somatotypes. Methodologies for growth studies.

11.1 Relevance of menarche, menopause and other bioevents to fertility. Fertility patterns and differentials.

11.2 Demographic theories-biological, social and cultural.

11.3 Biological and socio-ecological factors influencing fecundity, fertility, natality and mortality.

12. **Applications of Anthropology** : Anthropology of sports, Nutritional anthropology, Anthropology in designing of defence and other equipments, Forensic Anthropology, Methods and principles of personal identification and reconstruction, Applied human genetics-Paternity diagnosis, genetic counseling and eugenics, DNA technology in diseases and medicine, serogenetics and cytogenetics in reproductive biology.

PAPER-II

1.1 **Evolution of the Indian Culture and Civilization**.ï ï Prehistoric (Palaeolithic, Mesolithic, Neolithic and Neolithic-Chalcolithic), Protohistoric (Indus Civilization). Pre-Harappan, Harappan and post-Harappan cultures. Contributions of the tribal cultures to Indian civilization.

1.2 **Palaeo**.ï ï Anthropological evidences from India with special reference to Siwaliks and Narmada basin
(Ramapithecus, Sivapithecus and Narmada Man).

1.3. **Ethno-archaeology in India**.ï ï The concept of ethno-archaeology; Survivals and Parallels among the hunting, foraging, fishing, pastoral and peasant communities including arts and crafts producing communities.

2. **Demographic profile of India**.ï ï Ethnic and linguistic elements in the Indian population and their distribution. Indian population-factors influencing its structure and growth.

3.1 **The structure and nature of traditional Indian Social System**.ï ï Varnashram, Purushartha, Karma, Rina and Rebirth.

3.2 **Caste system in India**.ï ï Structure and characteristics Varna and caste, Theories of origin of caste system, Dominant caste, Caste mobility, Future of caste system, Jajmani system. Tribe-case continuum.

3.3 Sacred Complex and Nature-Man-Spirit Complex.

3.4. Impact of Buddhism, Jainism, Islam and Christianity of Indian society.

4. Emergence, growth and development in India- Contributions of the 18th, 19th and early 20th Century scholar-administrators. Contributions of Indian anthropologists to tribal and caste studies.

5.1 **Indian Village**.ï ï Significance of village study in India; Indian village as a social system; Traditional and changing patterns of settlement and inter-caste relations; Agrarian relations in Indian villages; Impact of globalization on Indian villages.

5.2 Linguistic and religious minorities and their social, political and economic status.

5.3 Indigenous and exogenous processes of socio-cultural change in Indian society: Sanskritization, Westernization, Modernization; Inter-play of little and great traditions; Panchayati Raj and social change; Media and Social change.

6.1 **Tribal situation in India**.ï ï Bio-genetic variability, linguistic and socio-economic characteristics of the tribal populations and their distribution.

6.2 **Problems of the tribal Communities**.ï ï Land alienation, poverty, indebtedness, low literacy, poor educational facilities, unemployment, under-employment, health and nutrition.

6.3 Developmental projects and their impact on tribal displacement and problems of rehabilitation. Development of forest policy and tribals. Impact of urbanisation and industrialization on tribal populations.

7.1 Problems of exploitation and deprivation of Scheduled Castes, Scheduled Tribes and Other Backward Classes. Constitutional safeguards for Scheduled Tribes and Scheduled Castes.

7.2 Social change and contemporary tribal societies : Impact of modern democratic institutions, development programmes and welfare measures on tribals and weaker sections.

7.3 The concept of ethnicity; Ethnic conflicts and political developments; Unrest among tribal communities; Regionalism and demand for autonomy; Pseudo-tribalism. Social change among the tribes during colonial and post-Independent India.

8.1 Impact of Hinduism, Buddhism, Christianity, Islam and other religions on tribal societies.

8.2 Tribe and nation state-a comparative study of tribal communities in India and other countries.

9.1 History of administration of tribal areas, tribal policies, plans, programmes of tribal development and their implementation. The concept of PTGs (Primitive Tribal Groups), their distribution, special programmes for their development. Role of N. G.. Os in tribal development.

9.2 Role of anthropology in tribal and rural development.

9.3 Contributions of anthropology to the understanding of regionalism, communalism and ethnic and political movements.

BOTANY

PAPER-I

1. **Microbiology and Plant Pathology :**
   Structure and reproduction/multiplication of viruses, viroids, bacteria, fungi and mycoplasma; Applications of microbiology in agriculture, industry, medicine and in control of soil and water pollution; Prion and Prion hypothesis.

   Important crop diseases caused by viruses, bacteria, mycoplasma, fungi and nematodes; Modes of infection and dissemination; Molecular basis of infection and disease resistance/defence; Physiology of parasitism and control measures. Fungal toxins. Modelling and disease forecasting; Plant quarantine.

2. **Cryptogams :**

   Algae, fungi, lichens, bryophytes, pteridophytes-structure and reproduction from evolutionary viewpoint; Distribution of Cryptogams in India and their ecological and economic importance.

3. **Phanerogams :**

   Gymnosperms : Concept of Progymnosperms. Classification and distribution of gymnosperms. Salient features of Cycadales, Ginkgoales, Coniferales and Gnetales, their structure and reproduction. General account of Cycadofilicales, Bennettitales and Cordiaitailes; Geological time scale; Type of fossils and their study techniques.

   Angiosperms : Systematics, anatomy, embryology, palynology and phylogency.

   Taxonomic hierarchy; International Code of Botanical Nomenclature; Numerical taxomomy and chemotaxomomy; Evidence from anatomy, embryology and palynology.

Origin and evolution of angiosperms; Comparative account of various systems of classification of angiosperms; Study of angiospermic families- Mangnoliaceae, Ranunculaceae, Brassicaceae, Rosaceae, Fabaceae, Euphorbiaceae, Malvaceae, Dipterocarpaceae, Apiaceae, Asclepiadaceae, Verbenaceae, Solanaceae, Rubiaceae, Cucurbitaceae, Asteraceae, Poaceae, Arecaceae, Liliaceae, Musaceae and Orchidaceae.

Stomata and their types; Glandular and non-glandular trichomes; Unusual secondary growth; Anatomy of C3 and C4 plants; Xylem and phloem differentiation; Wood anatomy.

Development of male and female gametophytes, pollination, fertilization; Endosperm-its development and function. Patterns of embryo development; Polyembroyony, apomixes; Applications of palynology; Experimental embryology including pollen storage and test-tube fertilization.

4. **Plant Resource Development :**

Domestication and introduction of plants; Origin of cultivated plants, Vavilovôs centres of origin. Plants as sources for food, fodder, fibres, spices, beverages, edible oils, drugs, narcotics, insecticides, timber, gums, resins and dyes; latex, cellulose, starch and its products; Perfumery; Importance of Ethnobotany in Indian context; Energy plantations; Botanical Gardens and Herbaria.

5. **Morphogenesis :**

Totipotency, polarity, symmetry and differentiation; Cell, tissue, organ and protoplast culture. Somatic hybrids and Cybrids; Micropropagation; Somaclonal variation and its applications; Pollen haploids, embryo rescue methods and their applications.

PAPER-II

1. **Cell Biology :**

Techniques of cell biology. Prokaryotic and eukaryotic cells-structural and ultrastructural details; Structure and function of extracellular matrix (cell wall) and membranes-cell adhesion, membrane transport and vesicular transport; Structure and function of cell organelles (chloroplasts, mitochondria, ER, dictyosomes ribosomes, endosomes, lysosomes, peroxisomes; Cytoskelaton and microtubules; Nucleus, nucleolus, nuclear pore complex; Chromatin and nucleosome; Cell signalling and cell receptors; Signal transduction Mitosis and meiosis; molecular basis of cell cycle. Numerical and structural variations in chromosomes and their significance; Chromatin organization and packaging of genome; Polytene chromosomes; B-chromosomes-structure, behaviour and significance.

2. **Genetics, Molecular Biology and Evolution :**

Development of genetics, and gene versus allele concepts (Pseudoalleles); Quantitative genetics and multiple factors; Incomplete dominance, polygenic inheritance, multiple alleles; Linkage and crossing over of gene mapping including molecular maps (idea of mapping, function); Sex chromosomes and sex-linked inheritance; sex determination and molecular basis of sex differentiation; Mutations (biochemical and molecular basis); Cytoplasmic inheritance and cytoplasmic genes (including genetics of male sterility).

Structure and synthesis of nucleic acids and proteins; Genetic code and regulation of gene expression; Gene silencing; Multigene families; Organic evolution-evidences, mechanism and theories.

Role of RNA in origin and evolution.

3. **Plant Breeding, Biotechnology and Biostatistics :**

Methods of plant breeding-introduction, selection and hybridization (pedigree, backcross, mass selection, bulk method); Mutation,

polyploidy, male sterility and heterosis breeding. Use of apomixes in plant breeding; DNA sequencing; Genetic engineering-methods of transfer of genes; Transgenic crops and biosafety aspects; Development and use of molecular markers in plant breeding; Tools and techniques-probe, southern blotting, DNA fingerprinting, PCR and FISH. Standard deviation and coefficient of variation (CV). Tests of significance (Z-test, t-test and chi-square tests). Probability and distributions (normal, binomial and Poisson). Correlation and regression.

4. **Physiology and Biochemistry :**

Water relations, mineral nutrition and ion transport, mineral deficiencies. Photosynthesis-photochemical reactions, photophosphorylation and carbon fixation pathways ; C3, C4 and CAM pathways; Mechanism of pholem transport, Respiration (anerobic and aerobic, including fermentation)-electron transport chain and oxidative phosphorylation; Photorespiration; Chemiosmotic theory and ATP synthesis; Lipid metabolism; Nitrogen fixation and nitrogen metabolism. Enzymes, coenzymes; Energy transfer and energy conservation. Importance of secondary metabolites. Pigments as photoreceptors (plastidial pigments and phytochrome). Plant movements; Photoperiodism and flowering, vernalization, senescence; Growth substances-their chemical nature, role and applications in agri-horticulture; growth indices, growth movements. Stress physiology (heat, water, salinity, metal); Fruit and seed physiology. Dormancy, storage and germination of seed. Fruit ripening-its molecular basis and manipulation.

5. **Ecology and Plant Geography :**

Concept of ecosystem; Ecological factors. Concepts and dynamics of community; Plant succession. Concepts of biosphere; Ecosystems; Conservation; Pollution and its control (including phytoreme-diation); Plant indicators; Environment (Protection) Act.

Forest types of India-Ecological and economic importance of forests, afforestation, deforestation and social forestry; Endangered plants, endemism IUCN categories, Red Data Books; Biodiversity and its conservation; Protected Area Network; Convention of Biological Diversity, Farmers Rights; and Intellectual Property Rights; Concept of Sustainable Development; Biogeochemical cycles. Global warming and climatic change; Invasive species; Environmental Impact Assessment; Phytogeographical regions of India.

CHEMISTRY

PAPER-I

1. **Atomic Structure :**

Heisenbergôs uncertainty principle Schrodinger wave equation (time independent); Interpretation of wave function, particle in one-dimensional box, quantum numbers, hydrogen atom wave functions; Shapes of s, p and d orbitals.

2. **Chemical bonding :**

Ionic bond, characteristics of ionic compounds, lattice energy, Born-Haber cycle; covalent bond and its general characteristics, polarities of bonds in molecules and their dipole moments; Valence bond theory, concept of resonance and resonance energy; Molecular orbital theory (LCAO method); bonding H2 +, H2 He_2 + to Ne_2, NO, CO, HF, CN^-, Comparison of valence bond and molecular orbital theories, bond order, bond strength and bond length.

3. **Solid State :**

Crystal systems; Designation of crystal faces, lattice structures and unit cell; Braggôs law; X-ray diffraction by crystals; Close packing, radius ratio rules, calculation of some limiting radius ratio values; Structures of NaCI, ZnS, CsCI, CaF_2; Stoichiometric and nonstoichiometric defects, impurity defects, semi-conductors.

4. **The Gaseous State and Transport Phenomenon :**

Equation of state for real gases, intermolecular interactions, and critical phenomena and liquefaction of gases; Maxwellôs distribution of speeds, intermolecular collisions, collisions on the wall and effusion; Thermal conductivity and viscosity of ideal gases.

5. **Liquid State :**

Kelvin equation; Surface tension and surface enercy, wetting and contact angle, interfacial tension and capillary action.

6. **Thermodynamics :**

Work, heat and internal energy; first law of thermodynamics.

Second law of thermodynamics; entropy as a state function, entropy changes in various processes, entropy-reversibility and irreversibility, Free energy functions; Thermodynamic equation of state; Maxwell relations; Temperature, volume and pressure dependence of U, H, A, G, Cp and Cv, α and β ; J-T effect and inversion temperature; criteria for equilibrium, relation between equilibrium constant and thermodynamic quantities; Nernst heat theorem, introductory idea of third law of thermodynamics.

7. **Phase Equilibria and Solutions :**

Clausius-Clapeyron equation; phase diagram for a pure substance; phase equilibria in binary systems, partially miscible liquids-upper and lower critical solution temperatures; partial molar quantities, their significance and determination; excess thermodynamic functions and their determination.

8. **Electrochemistry :**

Debye-Huckel theory of strong electrolytes and Debye-Huckel limiting Law for various equilibrium and transport properties.

Galvanic cells, concentration cells; electrochemical series, measurement of e.m.f. of cells and its applications fuel cells and batteries.

Processes at electrodes; double layer at the interface; rate of charge transfer, current density; overpotential; electroanalytical techniques : amperometry, ion selective electrodes and their use.

9. **Chemical Kinetics :**

Differential and integral rate equations for zeroth, first, second and fractional order reactions; Rate equations involving reverse, parallel, consecutive and chain reactions; Branching chain and explosions; effect of temperature and pressure on rate constant. Study of fast reactions by stop-flow and relaxation methods. Collisions and transition state theories.

10. **Photochemistry :**

Absorption of light; decay of excited state by different routes; photochemical reactions between hydrogen and halogens and their quantum yields.

11. **Surface Phenomena and Catalysis :**

Adsorption from gases and solutions on solid adsorbents; Langmuir and B.E.T. adsorption isotherms; determination of surface area, characteristics and mechanism of reaction on heterogeneous catalysts.

12. **Bio-inorganic Chemistry :**

Metal ions in biological systems and their role in ion-transport across the membranes (molecular mechanism), oxygen-uptake proteins, cytochromes and ferrodoxins.

13. **Coordination Chemistry :**

(i) Bonding in transition of metal complexes. Valence bond theory, crystal field theory and its modifications; applications of theories

in the explanation of magnetism and elctronic spectra of metal complexes.

(ii) Isomerism in coordination compounds; IUPAC nomenclature of coordination compounds; stereochemistry of complexes with 4 and 6 coordination numbers; chelate effect and polynuclear complexes; trans effect and its theories; kinetics of substitution reactions in square-planar complexes; thermodynamic and kinetic stability of complexes.

(iii) EAN rule, Synthesis structure and reactivity of metal carbonyls; carboxylate anions, carbonyl hydrides and metal nitrosyl compounds.

(iv) Complexes with aromatic systems, synthesis, structure and bonding in metal olefin complexes, alkyne complexes and cyclopentadienyl complexes; coordinative unsaturation, oxidative addition reactions, insertion reactions, fluxional molecules and their characterization; Compounds with metal-metal bonds and metal atom clusters.

14. **Main Group Chemistry :**

Boranes, borazines, phosphazenes and cyclic phosphazene, silicates and silicones, Interhalogen compounds; Sulphur-nitrogen compounds, noble gas compounds.

15. **General Chemistry of 'f' Block Element :**

Lanthanides and actinides: separation, oxidation states, magnetic and spectral properties; lanthanide contraction.

PAPER-II

1. **Delocalised Covalent Bonding :**

Aromaticity, anti-aromaticity; annulenes, azulenes, tropolones, fulvenes, sydnones.

2. (i) **Reaction mechanisms :** General methods (both kinetic and non-kinetic) of study of mechanisms or organic reactions : isotopies, method cross-over experiment, intermediate trapping, stereochemistry; energy of activation; thermodynamic control and kinetic control of reactions.

(ii) **Reactive intermediates :** Generation, geometry, stability and reactions of carboniumions and carbanions, free radicals, carbenes, benzynes and nitrenes.

(iii) **Substitution reactions :** S_n 1, S_n 2, and S_n i, mechanisms ; neighbouring group participation; electrophilic and nucleophilic reactions of aromatic compounds including heterocyclic compounds-pyrrole, furan, thiophene and indole.

(iv) **Elimination reactions :** E1, E2 and E1cb mechanisms; orientation in E2 reactions-Saytzeff and Hoffmann; pyrolytic *syn* elimination-acetate pyrolysis, Chugaev and Cope eliminations.

(v) **Addition reactions :** Electrophilic addition to C=C and C≡C; nucleophilic addition to C=O, C≡N, conjugated olefins and carbonyls.

(vi) **Reactions and Rearrangements :**

(a) Pinacol-pinacolone, Hoffmann, Beckmann, Baeyer-Villiger, Favorskii, Fries, Claisen, Cope, Stevens and Wagner-Meerwein rearrangements.

(b) Aldol condensation, Claisen condensation, Dieckmann, Perkin, Knoevenagel, Witting, Clemmensen, Wolff-Kishner, Cannizzaro and Von Richter reactions; Stobbe, benzoin and acyloin condensations; Fischer indole synthesis, Skraup synthesis, Bischler-Napieralski, Sandmeyer, Reimer-Tiemann and Reformatsky reactions.

3. **Pericyclic reactions**.ïï Classification and examples; Woodward-Hoffmann rules-electrocyclic reactions,

cycloaddition reactions [2+2 and 4+2] and sigmatropic shifts [1, 3; 3, 3 and 1, 5], FMO approach.

4. (i) **Preparation and Properties of Polymers :** Organic polymerspolyethylene, polystyrene, polyvinyl chloride, teflon, nylon, terylene, synthetic and natural rubber.

   (ii) Biopolymer Structure of proteins, DNA and RNA.

5. **Synthetic Uses of Reagents :**

   OsO_4, HIO_4, CrO_3, $Pb(OAc)_4$, SeO_2, NBS, B_2H_6, Na-Liquid NH_3, $LiAlH_4$, $NaBH_4$, n-BuLi, MCPBA.

6. **Photochemistry :** Photochemical reactions of simple organic compounds, excited and ground states, singlet and triplet states, Norrish-Type I and Type II reactions.

7. **Spectroscopy :**

   Principle and applications in structure elucidation :

   (i) **Rotational**-Diatomic molecules ; isotopic substitution and rotational constants.

   (ii) **Vibrational**-Diatomic molecules, linear triatomic molecules, specific frequencies of functional groups in polyatomic molecules.

   (iii) **Electronic**-Singlet and triplet states. $n \rightarrow \pi^*$ and $\pi \rightarrow \pi^*$ transitions; application to conjugated double bonds and conjugated carbonyls Woodward-Fieser rules; Charge transfer spectra.

   (iv) **Nuclear Magnetic Resonance (^{1}HNMR)** : Basic principle; chemical shift and spin-spin interaction and coupling constants.

   (v) **Mass Spectrometry :** Parent peak, base peak, metastable peak, McLafferty rearrangement.

CIVIL ENGINEERING

PAPER-I

1. **Engineering Mechanics, Strength of Materials and Structural Analysis**.

1.1 **Engineering Mechanics :**

Units and Dimensions, Sl Units, Vectors, Concept of Force, Concept of particle and rigid body. Concurrent, Non- Concurrent and parallel forces in a plane, moment of force free body diagram, conditions of equilibrium, Principle of virtual work, equivalent force system.

First and Second Moment of area, Mass Moment of Inertia.

Static Friction. Kinematics and Kinetics :

Kinematics in cartesian Co-ordinates, motion under uniform and non-uniform acceleration, motion under gravity. Kinetics of particle : Momentum and Energy principles, collision of elastic bodies, rotation of rigid bodies.

1.2 **Strength of Materials :**

Simple Stress and Strain, Elastic constants, axially loaded compression members, Shear force and bending moment, theory of simple bending, Shear Stress distribution across cross sections, Beams of uniform strength.

Deflection of beams : Mecaulayôs method, Mohrôs Moment area method, Conjugate beam method, unit load method. Torsion of Shafts, Elastic stability of columns, Eulerôs, Rankineôs and Secant formulae.

1.3 **Structural Analysis :**

Castiglianioôs theorems I and II, unit load method, of consistent deformation applied to beams and pin jointed trusses. Slope-deflection, moment distribution.

Rolling loads and Influences lines : Influences lines for Shear Force and Bending moment at a section of a beam. Criteria for maximum shear force and bending Moment in beams traversed by a system of moving loads. Influences lines for simply supported plane pin jointed trusses.

Arches :ð Three hinged, two hinged and fixed arches, rib shortening and temperature effects. Matrix mehods of analysis : Force method and displacement method of analysis of indeterminate beams and rigid frames. Plastic Analysis of beams and frames : Theory of plastic bending, plastic analysis, statical method, Mechanism method.

Unsymmetrical bending :ð Moment of inertia, product of inertia, position of Neutral Axis and Principal axes, calculation of bending stresses.

2. **Design of Structures :**

Steel, Concrete and Masonry Structures.

2.1 **Structural Steel Design :**

Structural steel : Factors of safety and load factors. Riveted, bolted and welded joints and connections. Design of tension and compression members, beams of built up section, riveted and welded plate girders, gantry girders, stancheons with battens and lacings.

2.2 **Design of Concrete and Masonry Structures :**

Concept of mix design. Reinforced Concrete : Working Stress and Limit State method of design- Recommendations of I. S. codes. Design of one way and two way slabs, stair-case slabs, simple and continuous beams of rectangular, T and L sections. Compression members under direct load with or without eccentricity.

Cantilever and Counter fort type retaining walls.

Water tanks : Design requirements for Rectangular and circular tanks resting on ground.

Prestressed Concrete : Methods and systems of prestressing, anchorages, Analysis and design of sections for flexure based on working stress, loss of prestress.

Design of brick masonry as per I. S. Codes.

3. **Fluid Mechanics, Open Channel Flow and Hydraulic Machines :**

3.1 **Fluid Mechanics :**

Fluid properties and their role in fluid motion, fluid statics including forces acting on plane and curve surfaces.

Kinematics and Dynamics of Fluid flow : Velocity and accelerations, stream lines, equation of continuity, irrotational and rotational flow, velocity potential and stream functions.

Continuity, momentum, energy equation, Navier Stokes equation, Eulerôs equation of motion, application to fluid flow problems, pipe flow, sluice gates, weirs.

3.2 **Dimensional Analysis and Similitude :**

Buckinghamôs Pi-theorem, dimensionless parameters.

3.3 **Laminar Flow :**

Laminar flow between parallel, stationary and moving plates, flow through tube.

3.4 **Boundary layer :**

Laminar and turbulent boundary layer on a flat plate, laminar sub-layer, smooth and rough boundaries, drag and lift.

Turbulent flow through pipes : Characteristics of turbulent flow, velocity distribution and variation of pipe friction factor, hydraulic grade line and total energy line.

3.5 **Open Channel Flow :**

Uniform and non-uniform flows, momentum and energy correction factors, specific energy and specific force, critical depth, rapidly

varied flow, hydraulic jump, gradually varied flow, classification of surface profiles, control section, step method of integration of varied flow equation.

3.6 **Hydraulic Machines and Hydropower :**

Hydraulic turbines, types classification, Choice of turbines performance parameters, controls, characteristics, specific speed.

Principles of hydropower development.

4. **Geotechnical Engineering :**

Soil Type and Structure-gradation and particle size distribution-consistency limits.

Water in soil-capillary and structural-effective stress and pore water pressure-permeability concept-filed and laboratory determination of permeability-Seepage pressure-quick sand conditions-Shear strength determination- Mohr Coulomb concept.

Compaction of soil-Laboratory and filed test.

Compressibility and consolidation concept-consolidation theory-consolidation settlement analysis.

Earth pressure theory and analysis for retaining walls, Application for sheet piles and Braced excavation.

Bearing capacity of soil-approaches for analysis-Filed tests-settlement analysis-stability of slope of earth walk. Subsuface exploration of soils-methods.

Foundation-Type and selection criteria for foundation of structures-Design criteria for foundation-Analysis of distribution of stress for footings and pile-pile group action-pile load test.

Ground improvement techniques.

PAPER-II

1. **Construction Technology, Equipment, Planning and Management**

1.1 **Construction Technology**

Engineering Materials :

Physical properties of construction materials with respect to their use in construction-Stones, Bricks and Tiles ; Lime, Cement, different types of Mortars and Concrete.

Specific use of ferro cement, fibre reinforced C. C., High stength concrete.

Timber ; Properties defects-common preservation treatments.

Use and selection of materials for specific use like Low Cost Housing, Mass Housing, High Rise Buildings.

1.2 **Construction :**

Masonry principles using Brick, Stone, Blocks-construction detailing and strength characteristics.

Types of plastering, pointing, flooring, roofing and construction features.

Common repairs in buildings.

Principle of functional planning of building for residents and specific use-Building code provisions.

Basic principles of detailed and approximate estimating-specification writing and rate analysis-principles of valuation of real property.

Machinery for earthwork, concreting and their specific uses-Factors affecting selection of equipments-operating cost of equipments.

1.3 **Construction Planning and Management :**

Construction activity-schedules-organization for construction industry-Quality assurance principles.

Use Basic principle of network-analysis in form of CPM and PERT-their use in construction monitoring, Cost optimization and resource allocation.

Basic principles of Economic analysis and methods.

Project profitability-Basic principles of Boot approach to financial planning-simple toll fixation criterions.

2. **Surveying and Transportation Engineering :**

2.1 **Surveying** : Common methods and instruments for distance and angle measurement for CE work-their use in plane table, traverse survey, levelling work, triangulation, contouring and topographical map.

Basic principles of photogrammetry and remote sensing.

2.2 **Railways Engineering :**

Permanent way-components, types and their function-Functions and Design constituents of turn and crossing-Necessity of geometric design of track-Design of station and yards.

2.3 **Highway Engineering :**

Principles of Highway alignments-classification and geometrical design elements and standards for Roads.

Pavement structure for flexible and rigid pavements-Design principles and methodology of pavements.

Typical construction methods and standards of materials for stabilized soil, WBM, Bituminous works and CC roads.

Surface and sub-surface drainge arrangements for roads-culvert structures.

Pavement distresses and strengthening by overlays.

Traffic surveys and their application in traffic planning-Typical design features for channelized, intersection rotary etc.-signal designs-standard Traffic signs and markings.

3. **Hydrology, Water Resources and Engineering :**

3.1 **Hydrology :**

Hydrological cycle, precipitation, evaporation, transpiration, infiltration, overland flow, hydrograph, flood frequency analyses, flood routing through a reservoir, channel flow routing-Muskingam method.

3.2 **Ground Water flow :**

Specific yield, storage coefficient, coefficient of permeability, confined and unconfined aquifers, aquifers, aquitards, radial flow into a well under confined and unconfined conditions.

3.3 **Water Resources Engineering :**

Ground and surface water resources, single and multipurpose projects, storage capacity of reservoirs, reservoir losses, reservoir sedimentation.

3.4 I**rrigation Engineering :**

(i) Water requirements of crops : consumptive use, duty and delta, irrigation methods and their efficiencies.

(ii) Canals : Distribution systems for canal irrigation, canal capacity, canal losses, alignment of main and distributory canals, most efficient section, lined canals, their design, regime theory, critical shear stress, bed load.

(iii) Water logging : causes and control, salinity.

(iv) Canal structures : Design of head regulators, canal falls, aqueducts, metering flumes and canal outlets.

(v) Diversion head work : Principles and design of weirs on permeable and impermeable foundation, Khoslaôs theory, energy dissipation.

(vi) Storage works : Types of dams, design, principles of rigid gravity stability analysis.

(vii) Spillways : Spillway types, energy dissipation.

(viii) River training : Objectives of river training, methods of river training.

4. **Environmental Engineering :**

4.1 **Water Supply :**

Predicting demand for water, impurities of water and their significance, physical, chemical and bacteriological analysis, waterborne diseases, standards for potable water.

4.2 **Intake of Water :**

Water treatment : principles of coagulation, flocculation and sedimentation; slow-, rapid-, pressure-, filters; chlorination, softening, removal of taste, odour and salinity.

4.3 **Sewerage Systems :**

Domestic and industrial wastes, store sewage- separate and combined systems, flow through sewers, design of sewers.

4.4 **Sewage Characterisation :**

BOD, COD, solids, dissolved oxygen, nitrogen and TOC. Standards of disposal in normal water course and on land.

4.5 **Sewage Treatment :**

Working principles, units, chambers, sedimentation tank, trickling filters, oxidation ponds, activated sludge process, septic tank, disposal of sludge, recycling of waste water.

4.6 **Solid waste :**

Collection and disposal in rural and urban contexts, management of long-term ill-effects.

5. **Environmental pollution :**

Sustainable development. Radioactive wastes and disposal. Environmental impact assessment for thermal power plants, mines, river valley projects. Air pollution. Pollution control acts.

COMMERCE AND ACCOUNTANCY

PAPER-I

Accounting and Finance

Accounting, Taxation & Auditing

1. **Financing Accounting :**

Accounting as a financial information system; Impact of behavioural sciences. Accounting Standards e. g. Accounting for Depreciation, Inventories, Research and Development Costs, Long-term Construction Contracts, Revenue Recognition, Fixed Assets, Contingencies, Foreign Exchange Transactions, Investments and Government Grants, Cash Flow Statement, Earnings per Share.

Accounting for Share Capital Transactions including Bonus Shares, Right Shares.

Employees Stock Option and Buy-Back of Securities.

Preparation and Presentation of Company Final Accounts.

Amalgamations, Absorption and Reconstruction of Companies.

2. **Cost Accounting :**

Nature and functions of cost accounting, Installation of Cost Accounting System, Cost Concepts related to Income Measurement, Profit Planning, Cost Control and Decision Making.

Methods of Costing : Job Costing, Process Costing, Activity Based Costing.

Volume-cost-Profit Relationship as a tool of Profit Planning.

Incremental Analysis/Differential Costing as a Tool of Pricing Decisions, Product Decisions, Make or Buy Decisions, Shut-Down Decisions etc.

Techniques of Cost Control and Cost Reduction : Budgeting as a Tool of Planning and Control, Standard Costing and Variance Analysis.

Responsibility Accounting and Divisional Performance Measurement.

3. **Taxation :**

Income Tax : Definitions, Basis of charge; Incomes which do not form part of total income. Simple problems of Computation of Income (of individuals only) under various heads, i. e., Salaries, Income from House Property, Profits and Gains from Business or Profession, Capital Gains, Income from other sources, Income of other Persons included in Assesseeôs Total Income.

Set-off and Carry forward of Loss, Deductions from Gross Total Income.

Salient Features/Provisions Related to VAT and Services Tax.

4. **Auditing :**

Company Audit : Audit related to Divisible Profits, Dividends, Special investigations, Tax Audit.

Audit of Banking, Insurance, Non-Profit Organization and Charitable Societies/Trusts/Organizations.

Financial Management, Financial Institutions and Markets :

1. **Financial Management :**

Finance Function : Nature, Scope and Objectives of Financial Management : Risk and Return Relationship.

Tools of Financial Analysis : Ratio Analysis, Funds-Flow and Cash-Flow Statement.

Capital Budgeting Decisions : Process, Procedures and Appraisal Methods, Risk and Uncertainty Anlysis and Methods.

Cost of Capital : Concept, Computation of Specific Costs and Weighted Average Cost of Capital, CAPM as aTool of Determining Cost of Equity Capital.

Financing Decisions : Theories of Capital Structure-Net Income (NI) Approach.

Net Operating Income (NOI) Approach, MM Approach and Traditional Approach, Designing of Capital structure : Types of Leverages (Operating, Financial and Combined), EBIT-EPS Analysis, and other factors.

Dividend Decisions and Valuation of Firm : Walterôs Model, MM Thesis, Gordanôs Model Lintnerôs Model. Factors Affecting Dividend Policy.Working Capital Management : Planning of Working Capital. Determinants of Working Capital. Components of Working Capital-Cash.

Inventory and Receivables. Corporate Restructuring with focus on Mergers and Acquisitions (Financial aspect only).

2. **Financial Markets and Institutions :**

Indian Financial System : An Overview

Money Markets : Participants, Structure and Instruments. Commercial Banks. Reforms in Banking Sector. Monetary and Credit Policy of RBI. RBI as a Regulator.

Capital Market : Primary and Secondary Market, Financial Market Instruments and Innovative Debt Instruments; SEBI as a Regulator.

Financial Services : Mutual Funds, Venture Capital, Credit Rating Agencies, Insurance and IRDA.

PAPER-II

Organisation Theory and Behaviours, Human Resource Management and Industrial Relations

Organisation Theory and Behaviour

1. **Organisation Theory :**

Nature and Concept of Organisation; External Environment of Organisation-Technological, Social, Political, Ecomomical and Legal; Organizational Goals Primary and Secondary Goals, Single and Multiple Goals; Management by Objectives.

Evolution of Organisation theory : Classical Neo-classical and system approach.

Modern Concepts of Organisation Theory : Organisational Design, Organisational Structure and Organisational Culture.

Organisational Design-Basic Challenges; Differentiation and Intergration Process; Centralization and Decentralization Process; Standardization/Formalization and Mutual Adjustment. Coordinating Formal and Informal Organizations. Mechanistic and Organic Structures.

Designing Organizational structures-Authority and Control; Line and Staff Functions, Specialization and Coordination. Types of Organization Structure-Functional. Matrix Structure, Project Structure. Nature and Basis of Power, Sources of Power, Power Structure and Politics. Impact of Information Technology on Organizational Design and Structure.

Managing Organizational Culture.

2. **Organisation Behaviour :**

Meaning and Concept ; Individual in organization: Personality, Theories, and Determinants; Pereception Meaning and Process.

Motivation : Concepts, Theories and Applications. Leadership-Theories and Styles. Quality of Work Life (QWL): Meaning and its impact on Performance, Ways of its Enhancement. Quality Circles (QC)-Meaning and their Importance. Management of Conflicts in Organizations. Transactional Analysis, Organizational Effectiveness, Management of Change.

Human Resources Management and Industrial Relations

1. **Human Resources Management (HRM) :**

Meaning Nature and Scope of HRM, Human Resource Planning, Job Analysis, Job Description, Job Specification, Recruitment Process, Selection Process, Orientational and Placement, Training and Development Process, Performance Appraisal and 360° Feed Back, Salary and Wage Administration, Job Evaluation, Employee Welfare, Promotions, Transfers and Separations.

2. **Industrial Relations (IR) :**

Meaning, Nature, Importance and Scope of IR, Formation of Trade Union, Trade Union Legislation, Trade Union Movement in India. Recognition of Trade Unions, Problems of Trade Unions in India. Impact of Liberalization on Trade Union Movement.

Nature of Industrial Disputes : Strikes and Lockouts, Causes of Disputes, Prevention and Settlement of Disputes.

Workerôs Participation in Management : Philosophy, Rationale, Present Day Status and Future Prospects.

Adjudication and Collective Bargaining.

Industrial Relations in Public Enterprises Absenteeism and Labour Turnover in Indian Industries and their Causes and Remedies.

ILO and its Functions.

ECONOMICS

PAPER-I

1. **Advanced Micro Economics :**

   (a) Marshallian and Varrasiam Approaches to Price determination.

   (b) Alternative Distribution Theories; Ricardo, Kaldor, Kaleeki.

   (c) Markets Structure : Monopolistic Competition, Duopoly, Oligopoly.

   (d) Modern Welfare Criteria : Pareto Hicks and Scitovsky, Arrowôs Impossibility Theorem, A. K. Senôs Social Welfare Function.

2. **Advance Macro Economics :**

   Approaches to Employment Income and Interest Rate determination : Classical, Keynes (IS-LM) curve, Neo-classical synthesis and New classical, Theories of Interest Rate determination and Interest Rate Structure.

3. **Money-Banking and Finance :**

   (a) Demand for and Supply of Money : Money Multiplier Quantity Theory of Money (Fisher, Pique and Friedman) and Keyneôs Theory on Demand for Money, Goals and Instruments of Monetary Management in Closed and Open Economies. Relation between the Central Bank and the Treasury. Proposal for ceiling on growth rate of money.

   (b) Public Finance and its Role in Market Economy : In stabilisation of supply, allocative, of resources and in

distribution and development. Sources of Government revenue, forms of Taxes and Subsidies, their incidence and effects. Limits to taxation, loans, crowding-out effects and limits to borrowings. Public expenditure and its effects.

4. **International Economics :**

(a) Old and New theories of International Trade.

(i) Comparative advantage.

(ii) Terms of Trade and Offer Curve.

(iii) Product Cycle and Strategic Trade Theories.

(iv) Trade as an engine of growth and theories of underdevelopment in an open economy.

(b) Forms of Protection : Tariff and quota.

(c) Balance of Payments Adjustment : Alternative Approaches.

(i) Price versus income, income adjustments under fixed exchange rates.

(ii) Theories of Policy Mix.

(iii) Exchange rate adjustments under capital mobility.

(iv) Floating Rates and their Implications for Developing Countries : Currency Boards.

(v) Trade Policy and Developing Countries.

(vi) BOP, adjustments and Policy Coordination in open economy macromodel.

(vii) Speculative attacks.

(viii) Trade Blocks and Monetary Unions.

(ix) WTO : TRIMS, TRIPS, Domestic Measures, Different Rounds of WTO talks.

5. **Growth and Development :**

(a) (i) Theories of growth : Harrodôs model ;

(ii) Lewis model of development with surplus labour ;

(iii) Balanced Unbalanced Growth ;

(iv) Human Capitals and Economic Growth ;

(v) Research and Development and Economic Growth.

(b) Process of Economic Development of less developed courtries : Myrdal and Kuzments on economic development and structural change : Role of Agriculture in Economic Development of less developed countries.

(c) Economic Development and International Trade and Investment, Role of Multinationals.

(d) Planning and Economic Development : changing role of Markets and Planning, Private-Public Partnership.

(e) Welfare indicators and measures of growth-Human Development Indices. The basic needs approach.

(f) Development and Environmental Sustainability-Renewable and Non-renewable Resources, Environmental Degradation, Intergenerational equity development.

PAPER-II

Indian Economics in Post-Independence Era :

Land System and its changes, Commercialization of agriculture Drain theory, Laissez faire theory and critique, Manufacture and Transport : Jute, Cotton, Railways, Money and Credit.

Indian Economy After Independence :

A. **The Pre-Liberalization Era :**

(i) Contribution of Vakil, Gadgil and V. K. R. V. Rao.

(ii) Agriculture : Land Reforms and land tenure system, Green Revolution and capital formation in agriculture.

(iii) Industry Trends in composition and growth, Role of public and private sector, small scale and cottage industries.

(iv) National and per capita income : Patterns, trends, aggregate and sectoral composition and changes therein.

(v) Broad factors determining National Income and distribution, Measures of poverty, Trends in poverty and inequality.

B. **The Post-Liberalization Era :**

(i) New Economic Reform and Agriculture : Agriculture and WTO, Food processing, subsidies, Agricultural prices and public distribution system, Impact of public expenditure on agricultural growth.

(ii) New Economic Policy and Industry : Strategy of Industrialization, Privatization, Disinvestments, Role of foreign direct investment and multinationals.

(iii) New Economic Policy and Trade : Intellectual property rights : Implications of TRIPS, TRIMS, GATS and new EXIM policy.

(iv) New Exchange Rate Regime : Partial and full convertibility, Capital account convertibility.

(v) New Economic Policy and Public Finance : Fiscal Responsibility Act, Twelfth Finance Commission and Fiscal Federalism and Fiscal Consolidation.

(vi) New Economic Policy and Monetary System. Role of RBI under the new regime.

(vii) Planning : From Central Planning to indivative planning, Relation between planning and markets for growth and decentralized planning : 73rd and 74th Constitutional amendments.

(viii) New Economic Policy and Employment : Employment and poverty, Rural wages, Employment Generation, Poverty alleviation schemes, New Rural, Employment Guarantee Scheme.

ELECTRICAL ENGINEERING

PAPER-I

1. **Circuits-Theory :**

Circuit components; network graphs; KCL, KVL; Circuit analysis methods : nodal analysis, mesh analysis; basic network theorems and applications; transient analysis : RL, RC and RLC circuits; sinusoidal steady state analysis; resonant circuits; coupled circuits; balanced 3-phase circuits. Two-port networks.

2. **Signals and Systems :**

Representation of continuous-time and discrete-time signals and systems; LTI systems; convolution; impulse response; time-domain analysis of LTI systems based on convolution and differential/ difference equations. Fourier transform, Laplace transform, Z-transform, Transfer function. Sampling and recovery of signals DFT, FFT Processing of analog signals through discrete-time systems.

3. **E. M. Theory :**

Maxwellôs equations, wave propagation in bounded media. Boundary conditions, reflection and refraction of plane waves. Transmission lines : travelling and standing waves, impedance matching, Smith chart.

4. **Analog Electronics :**

Characteristics and equivalent circuits (large and small-signal) of Diode, BJT, JFET and MOSFET. Diode circuits : Clipping, clamping, rectifier. Biasing and bias stability. FET amplifiers. Current mirror; Amplifiers : single and multi-stage, differential, operational feedback and power. Analysis of amplifiers; frequency-response of amplifiers. OPAMP circuits. Filters; sinusoidal oscillators : criterion for oscillation; single-transistor and OPAMP configurations. Function generators and wave-shaping circuits. Linear and switching power supplies.

5. **Digital Electronics :**

Boolean algebra; minimisation of Boolean functions; logic gates; digital IC families (DTL, TTL, ECL, MOS, CMOS). Combinational circuits : arithmetic circuits, code converters, multiplexers and decoders. Sequential circuits: latches and flip-flops, counters and shift-registers. Comparators, timers, multivibrators. Sample and hold circuits, ADCs and DACs. Semiconductor memories. Logic implementation using programmable devices (ROM, PLA, FPGA).

6. **Energy Conversion :**

Principles of electromechanical energy conversion : Torque and emf in rotating machines. DC machines : characteristics and performance analysis; starting and speed control of motors. Transformers : principles of operation and analysis; regulation, efficiency; 3-phase transformers. 3-phase induction machines and synchronous machines : characteristics and performance analysis; speed control.

7. **Power Electronics and Electric Drives :**

Semi-conductor power devices : diode, transistor, thyristor, triac, GTO and MOSFET-static characteristics and principles of operation; triggering circuits; phase control rectifiers; bridge converters : fully-controlled and half-controlled; principles of thyristor choppers

and inverters; DC-DC converters; Switch mode inverter; basic concepts of speed control of dc and ac motor drives applications of variable-speed drives.

8. **Analog Communication :**

Random variables : continuous, discrete; probability, probability functions. Statistical averages; probability models; Random signals and noise : white noise, noise equivalent bandwidth; signal transmission with noise; signal to noise ratio. Linear CW modulation : Amplitude modulation : DSB, DSB-SC and SSB. Modulators and Demodulators; Phase and Frequency modulation : PM & FM signals; narrows band FM; generation & detection of FM and PM, Deemphasis, Preemphasis. CW modulation system : Superhetrodyne receivers, AM receivers, communication receivers, FM receivers, phase locked loop, SSB receiver Signal to noise ratio calculation or AM and FM receivers.

PAPER-II

1. **Control Systems :**

Elements of control systems ; block-diagram representations ; open-loop & closed-loop systems; principles and applications of feed-back. Control system components. LTI systems : time-domain and transform-domain analysis. Stability : Routh Hurwitz criterion, root-loci, Bode-plots and polor plots, Nyquistôs criterion; Design of lead-lad compensators. Proportional, PI, PID controllers. State-variable representation and analysis of control systems.

2. **Microprocessors and Microcomputers :**

PC organisation; CPU, instruction set, register settiming diagram, programming, interrupts, memory interfacing, I/O interfacing, programmable peripheral devices.

3. **Measurement and Instrumentation :**

Error analysis; measurement of current voltage, power, energy, power-factor, resistance, inductance, capacitance and frequency;

bridge measurements. Signal conditioning circuit; Electronic measuring instruments : multimeter, CRO, digital voltmeter, frequency counter, Q-meter, spectrum-analyser, distoration-meter. Transducers : thermocouple, thermistor, LVDT, strain-guage, piezo-electric crystal.

4. **Power Systems : Analysis and Control :**

Steady-state performance of overhead transmission lines and cables; principles of active and reactive power transfer and distribution; per-unit quantities; bus admittance and impedance matrices; load flow; voltage control and power factor correction; economic operation; symmetrical components, analysis of symmetrical and unsymmetrical faults. Concepts of system stability : swing curves and equal area criterion. Static VAR system. Basic concepts of HVDC transmission.

5. **Power System Protection :**

Principles of overcurrent, differential and distance protection. Concept of solid state relays. Circuit brakers. Computer aided protection : introduction; line, bus, generator, transformer protection; numeric relays and application of DSP to protection.

6. **Digital Communication :**

Pulse code modulation (PCM), defferential pulse code modulation (DPCM), delta modulation (DM), Digital modulation and demodulation schemes : amplitude, phase and frequency keying schemes (ASK, PSK, FSK). Error control coding : error detection and correction, linear block codes, convolation codes. Information measure and source coding. Data networks, 7-layer architecture.

GEOGRAPHY

PAPER-I

Principles of Geography

Physical Geography :

1. Geomorphology : Factors controlling landform development ; endogenetic and exogenetic forces ; Origin and evolution of the earthôs

crusts ; Fundamentals of geomagnetism; Physical conditions of the earthôs interior; Geosynclines; Continental drift; Isostasy; Plate tectonics; Recent views on mountain building; Volcanicity; Earthquakes and Tsunamis; Concepts of geomorphic cycles and Land scape development; Denudation chronology; Channel morphology; Erosion surfaces; Slope development; Applied Geomorphology; Geomorphology, economic geology and environment.

2. **Climatology :**

Temperature and pressure belts of the world; Heat budget of the earth; Atmospheric circulation ; Atmospheric stability and instability. Planetary and local winds; Monsoons and jet streams ; Air masses and fronto ; Temperate and tropical cyclones ; Types and distribution of precipitation ; Weather and Climate; Koppenôs Thornthwaiteôs and Trewar Thaôs classification of world climate; Hydrological cycle ; Global climatic change, and role and response of man in climatic changes Applied climatology and Urban climate.

3. **Oceanography :**

Bottom topography of the Atlantic, Indian and Pacific Oceans ; Temperature and salinity of the oceans ; Heat and salt budgets, Ocean deposits; Waves, currents and tides ; Marine resources; biotic, mineral and energy resources; Coral reefs coral bleaching; Sea-level changes; Law of the sea and marine pollution.

4. **Biogeography :**

Genesis of soils; Classification and distribution of soils; Soil profile ; Soil erosion, Degradation and conservation ; Factors influencing world distribution of plants and animals; Problems of deforestation and conservation measures ; Social forestry, agro-forestry; Wildlife ; Major gene pool centres.

5. **Environmental Geography :**

Principle ecology; Human ecological adaptations; Influence of man on ecology and environment; Global and regional ecological changes

and imbalances; Ecosystem their management and conservation; Environmental degradation, management and conservation; Biodiversity and sustainable development; Environmental policy; Environmental hazards and remedial measures; Environmental education and legislation.

Human Geography :

1. **Perspectives in Human Geography :**

   Areal differentiation ; Regional synthesis ; Dichotomy and dualism ; Environmentalism ; Quantitative revolution and locational analysis ; Radical, behavioural, human and welfare approaches ; Languages, religions and secularisation ; Cultural regions of the world; Human development indix.

2. **Economic Geography :**

   World economic development: measurement and problems ; World resources and their distribution ; Energy crisis ; the limits to growth ; World agriculture: typology of agricultural regions ; Agricultural inputs and productivity ; Food and nutritions problems ; Food security ; famine: causes, effects and remedies ; World industries : location patterns and problems ; Patterns of world trade.

3. **Population and Settlement Geography :**

   Growth and distribution of world population ; Demographic attributes; Causes and consequences of migration; Concepts of over-under- and optimum population; Population theories, world population problems and policies, Social well-being and quality of life ; Population as social capital.

   Types and patterns of rural settlements; Environmental issues in rural settlements ; Hierarchy of urban settlements ; Urban morphology ; Concept of primate city and rank-size rule ; Functional classification of towns ; Sphere of urban influence ; Rural-urban fringe ; Satellite towns; Problems and remedies of urbanization; Sustainable development of cities.

4. Regional Planning :

Concept of a region ; Types of regions and methods of regionalisation ; Growth centres and growth poles ; Regional imbalances ; Regional development strategies ; Environmental issues in regional planning ; Planning for sustainable development.

5. **Models, Theories and Laws in Human Geography :**

System analysis in Human geography; Malthusian, Marxian and demographic transition models; Central Place theories of Christaller and Losch; Perroux and Boudeville; Von Thunenôs model of agricultural location; Weberôs model of industrial location; Ostovôs model of stages of growth. Heart-land and Rimland theories; Laws of international boundaries and frontiers.

PAPER-II

GEOGRAPHY OF INDIA

1. **Physical Setting :**

Space relationship of India with neighbouring countries ; Structure and relief ; Drainage system and watersheds; Physiographic regions; Mechanism of Indian monsoons and rainfall patterns ; Tropical cyclones and western disturbances ; Floods and droughts ; Climatic regions ; Natural vegetation, Soil types and their distributions.

2. **Resources :**

Land, surface and ground water, energy, minerals, biotic and marine resources, Forest and wildlife resources and their conservation; Energy crisis.

3. **Agriculture :**

Infrastructure: irrigation, seeds, fertilizers, power; Institutional factors ; land holdings, land tenure and land reforms ; Cropping pattern, agricultural productivity, agricultural intensity, crop combination, land capability; Agro and social-forestry; Green revolution and its socio-

economic and ecological implications; Significance of dry farming; Livestock resources and white revolution; Aqua-culture; Sericulture, Agriculture and poultry; Agricultural regionalisation; Agro-climatic zones; Agro-ecological regions.

4. **Industry : Evolution of Industries :**

Locational factors of cotton, jute, textile, iron and steel, aluminium, fertiliser, paper, chemical and pharmaceutical, automobile, cottage and ago-based industries; Industrial houses and complexes including public sector underkings; Industrial regionalisation; New industrial policy ; Multinationals and liberalisation; Special Economic Zones ; Tourism including ecotourism.

5. **Transport, Communication and Trade :**

Road, railway, waterway, airway and pipeline networks and their complementary roles in regional development; Growing importance of ports on national and foreign trade ; Trade balance; Trade Policy; Export processing zones ; Developments in communication and information technology and their impacts on economy and society; Indian space programme.

6. **Cultural Setting :**

Historical Perspective of Indian Society; Racial linguistic and ethnic diversities; religious minorities; Major tribes, tribal areas and their problems; Cultural regions; Growth, distribution and density of population; Demographic attributes: sex-ratio, age structure, literacy rate, work-force, dependency ratio, longevity; migration (inter-regional, interaregional and international) and associated problems; Population problems and policies; Health indicators.

7. **Settlements :**

Types, patterns and morphology of rural settlements ; Urban developments ; Morphology of Indian cities; Functional classification of Indian cities; Conurbations and metropolitan regions ; Urban sprawl; Slums and asssociated problems; Town planning; Problems of urbanisation and remedies.

8. **Regional Development and Planning :**

Experience of regional planning in India; Five Year Plans; Integrated rural development programmes; Panchayati Raj and decentralised planning; Command area development; Watershed management; Planning for backward area, desert, drought-prone, hill tribal area development; Multi-level planning; Regional planning and development of island territories.

9. **Political Aspects :**

Geographical basis of Indian federalism; State reorganisation; Emergence of new states; Regional consciousness and inter-state issues; International boundary of India and related issues; Cross-border terrorism; Indiaôs role in world affairs; Geopolitics of South Asia and Indian Ocean realm.

10. **Contemporary Issues :**

Ecological issues : Environmental hazards: landslides, earthquakes, Tsunamis, floods and droughts, epidemics; Issues related to environmental pollution; Changes in patterns of land use ; Principles of environmental impact assessment and environmental management; Population explosion and food security ; Environmental degradation; Deforestation, desertification and soil erosion; Problems of agrarian and industrial unrest ; Regional disparities in economic development; Concept of sustainable growth and development; Environmental awareness; Linkage of rivers; Globalisation and Indian economy.

Note :ð Candidates will be required to answer one compulsory map question pertinent to subjects covered by this paper.

GEOLOGY

PAPER-I

1. **General Geology :**

The Solar System, meteorites, origin and interior of the earth and age of earth; Volcanoes-causes and products, Volcanic belts.

Earthquakes-causes, effects, seismic of zone of India; Island arcs, trenches and mid-ocean ridges; Continental drift; Seafloor spreading, plate tectonics. Isostasy.

2. **Geomorphology and Remote Sensing :**

Basic concepts of geomorphology. Weathering and soil formations; Landforms, slopes and drainage. Geomorphic cycles and their interpretation. Morphology and its relation to structures and lithology; Coastal geomorphology; Applications of geomorphology in mineral prospecting, civil engineering; hydrology and environmental studies; Geomorphology of Indian sub-continent.

Aerial photographs and their interpretation-merits and limitations; The Electromagnetic spectrum. Orbiting Satellites and Sensor Systems. Indian Remote Sensing Satellites. Satellite data products; Applications of remote sensing in geology; The Geographic Information System (GIS) and Global Positioning System (GPS)-its applications.

3. **Structural Geology :**

Principles of geologic mapping and map reading, projection diagrams, Stress and strain ellipsoid and stress-strain relationships of elastic, plastic and viscous materials; Strain markers in deformed rocks. Behaviour of minerals and rocks under deformation conditions. Folds and faults classification and mechanics; Structural analysis of folds, foliations, lineations, joints and faults, unconformities; Time-relationship between crystallization and deformation.

4. **Paleontology :**

Species-definition and nomenclature; Megafossils and Microfossils. Modes of preservation of fossils ; Different kinds of microfossils ; Application of microfossils in correlation, petroleum exploration, paleoclimatic and paleoceanographic studies ; Evolutionary trend in Hominidae, Equidae and Proboscidae. Siwalik fauna.

Gondwana flora and fauna and its importance; Index fossils and their significance.

5. **Indian Stratigraphy :**

Classification of stratigraphic sequences: lithostrati-graphic, biostratigraphic, chrono-stratigraphic and magnetostratigraphic and their interrelationships; Distribution and classification of Precambrian rocks of India; Study of stratigraphic distribution and lithology of Phanerozoic rocks of India with reference to fauna, flora and economic importance. Major boundary problems-Cambrian/ Precambrian, Permian/Triassic, Cretaceous/Tertiary and Pliocene/ Pleistocene; Study of climatic conditions, paleogeography and igneous activity in the Indian sub-continent in the geological past. Tectonic framework of India. Evolution of the Himalayas.

6. **Hydrogeology and Engineering Geology :**

Hydrologic cycle and genetic classification of water; Movement of subsurface water; Springs; Porosity, permeability, hydraulic conductivity, transmissivity and storage coefficient, classification of aquifers; Water-bearing characteristics of rocks; Groundwater chemistry. Salt water intrusion. Types of wells. Drainage basin morphometry; Exploration for groundwater; Groundwater recharge; Problems and management of groundwater; Rainwater harvesting; Engineering properties of rocks; Geological investigations for dams, tunnels highways, railway and bridges; Rock as construction material; Landslides causes, prevention and rehabilitation; Earthquake-resistant structures.

PAPER-II

1. **Mineralogy :**

Classification of crystals into systems and classes of symmetry ; International system of crystallographic notation ; Use of projection diagrams to represent crystal symmetry; Elements of X-ray crystallography.

Physical and chemical characters of rock forming silicate mineral groups; Structural classification of silicates ; Common minerals of

igneous and metamorphic rocks ; Minerals of the carbonate, phosphate, sulphide and halide groups; Clay minerals.

Optical properties of common rock forming minerals ; Pleochroism, extinction angle, double refraction, birefringence, twinning and dispersion in minerals.

2. **Igneous and Metamorphic Petrology :**

Generation and crystallisation of magmas. Crystallisation of albite-anorthite, diopside-anorthite and diopside- wollastonite-silica systems. Bowen's Reaction Principle; Magmatic differentiation and assimilation. Petrogenetic significance of the textures and structures of igneous rocks. Petrography and petrogenesis of granite, syenite, diorite, basic and ultrabasic groups, charnockite, anorthosite and alkaline rocks. Carbonatites. Deccan volcanic province.

Types and agents of metamorphism. Metamorphic grades and zones; Phase rule. Facies of regional and contact metamorphism; ACF and AKF diagrams; Textures and structures of metamorphic rocks. Metamorphism of arenaceous, argillaceous and basic rocks; Minerals assemblages. Retrograde metamorphism; Metasomatism and granitisation, migmatites. Granulite terrains of India.

3. **Sedimenary Petrology :**

Sedimentas and Sedimentary rocks: Processes of formation; digenesis and lithification; Clastic and non-clastic rocks-their classification, petrography and depositional environment; Sedimentary facies and provenance. Sedimentary structures and their significance. Heavy minerals and their significance. Sedimentary basins of India.

4. **Economic Geology :**

Ore, ore mineral and gangue, tenor of ore. Classification of ore deposits; Processes of formation of mineral deposits; Controls of ore localisation; Ore texures and structures; Metallogenic epochs and provinces; Geology of the important Indian deposits of aluminium, chromium, copper, gold, iron, lead, zinc, manganese, titanium, uranium

and thorium and industrial minerals; Deposits of coal and petroleum in India, National Mineral Policy; Conservation and utilization of mineral resources. Marine mineral resources and Law of Sea.

5. **Mining Geology :**

Methods of prospecting-geological, geophysical, geochemical and geobotanical; Techniques of sampling. Estimation of reserves of ore; Methods of exploration and mining-metallic ores, industrial minerals, marine mineral resources and building stones. Mineral beneficiation and ore dressing.

6. **Geochemistry and Environmental Geology :**

Cosmic abundance of elements. Composition of the planets and meteorites. Structure and composition of earth and distribution of elements. Trace elements. Elements of crystal chemistry-types of chemical bonds, coordination number. Isomorphism and polymorphism. Elementary thermodynamics.

Natural hazards-floods, mass wasting, costal hazards, earthquakes and volcanic activity and mitigation; Environmental impact of urbanization, mining, industrial and radioactive waste disposal, use of fertilizers, dumping of mine waste and fly-ash. Pollution of ground and surface water, marine pollution. Environment protection-legislative measures in India; Sea level changes: causes and impact.

HISTORY

PAPER-I

1. **Sources :**

Archaeological sources :

Exploration, excavation, epigraphy, numismatics, monuments.

Literary sources :—Indigenous : Primary and secondary ; poetry, scientific literature, literature, literature in regional languages, religious literature.

Foreign account: Greek, Chinese and Arab writers.

2. **Pre-history and Proto-history :**

Geographical factors; hunting and gathering (paleolithic and mesolithic); Beginning of agriculture (neolithic and chalcolithic).

3. **Indus Valley Civilization :**

Origin, date, extent, characteristics-decline, survival and significance, art and architecture.

4. **Megalithic Cultures :**

Distribution of pastoral and farming cultures outside the Indus, Development of community life, Settlements, Development of agriculture, Crafts, Pottery, and Iron industry.

5. **Aryans and Vedic Period :**

Expansions of Aryans in India :

Vedic Period: Religious and philosophic literature; Transformation from Rig Vedic period to the later Vedic period; Political, social and economical life; Significance of the Vedic Age; Evolution of Monarchy and Varna system.

6. **Period of Mahajanapadas :**

Formation of States (Mahajanapada) : Republics and monarchies ; Rise of urban centres ; Trade routes ; Economic growth ; Introduction of coinage ; Spread of Jainism and Buddhism; Rise of Magadha and Nandas.

Iranian and Mecedonian invasions and their impact.

7. **Mauryan Empire :**

Foundation of the Mauryan Empire, Chandragupta, Kautilya and Arthashastra ; Ashoka ; Concept of Dharma ; Edicts ; Polity, Administration, Economy ; Art, architecture and sculpture ; External contacts ; Religion ; Spread of religion ; Literature.

Disintegration of the empire ; sungas and Kanvas.

8. **Post-Mauryan Period (Indo-Greeks, Sakas, Kushanas, Western Kshatrapas) :**

Contact with outside world; growth of urban centres, economy, coinage, development of religions, Mahayana, social conditions, art, architecture, culture, literature and science.

9. **Early State and Society in Eastern India, Deccan and South India :**

Kharavela, The Satavahanas, Tamil States of the Sangam Age; Administration, Economy, land grants, coinage, trade guilds and urban centres; Buddhist centres; Sangam literature and culture; Art and architecture.

10. **Guptas, Vakatakas and Vardhanas :**

Polity and administration, Economic conditions, Coinage of the Guptas, Land grants, Decline of urban centres, Indian feudalism, Caste system, Position of women, Education and educational institutions; Nalanda, Vikramshila and Vallabhi, Literature, scientific literature, art and architecture.

11. **Regional States during Gupta Era :**

The Kadambas, Pallavas, Chalukyas of Badami; Polity and Administration, Trade guilds, Literature; growth of Vaishnava and Saiva religions. Tamil Bhakit movement, Shankaracharya; Vedanta; Institutions of temple and temple architecture; Palas, Senas, Rashtrakutas, Paramaras, Polity and administration; Cultural aspects. Arab conquest of Sind; Alberuni, The Chalukyas of Kalyana, Cholas, Hoysalas, Pandyas; Polity and Administration; Local Government; Growth of art and architecture, religious sects, Institution of temple and Mathas, Agraharas, education and literature, economy and society.

12. **Themes in Early Indian Cultural History :**

Languages and texts, major stages in the evolution of art and architecture, major philosophical thinkers and schools, ideas in Science and Mathematics.

13. **Early Medieval India, 750-1200 :**

-Polity : Major political developments in Northern India and the peninsula, origin and the rise of Rajputs.

-The Cholas : administration, village economy and society ñIndian Feudalismò.

- Agrarian economy and urban settlements.

-Trade and commerce.

-Society: the status of the Brahman and the new social order.

- Condition of women.

-Indian science and technology.

14. **Cultural Traditions in India, 750-1200 :**

-Philosophy : Shankaracharya and Vedanta, Ramanuja and Vishishtadvaita, Madhva and Brahma-Mimansa.

-Religion : Forms and features of religion, Tamil devotional cult, growth of Bhakti, Islam and its arrival in India, Sufism.

-Literature : Literature in Sanskrit, growth of Tamil literature, literature in the newly developing languages, Kalhanôs Rajtarangini, Alberunôs India .

-Art and Architecture : Temple architecture, sculpture, painting.

15. **The Thirteenth Century :**

-Establishment of the Delhi Sultanate : The Ghurian invasions-factors behind Ghurian success.

-Economic, Social and cultural consequences.

-Foundation of Delhi Sultanate and early Turkish Sultans.

-Consolidation : The rule of Iltutmish and Balban.

16. **The Fourteenth Century :**

-ñThe Khalji Revolutionò.

-Alauddin Khalji: Conquests and territorial expansion, agrarian and economic measure.

-Muhammad Tughluq: Major projects, agrarian measures, bureaucracy of Muhammad Tughluq.

-Firuz Tugluq: Agrarian measures, achievements in civil engineering and public works, decline of the Sultanate, foreign contacts and Ibn Battuta's account.

17. **Society, Culture and Economy in the Thirteenth and Fourteenth Centuries :**

-Society : composition of rural society, ruling classes, town dwellers, women, religious classes, caste and slavery under the Sultanate, Bhakti movement, Sufi movement.

-Culture : Persian literature, literature in the regional languages of North India, literature in the languages of South India, Sultanate architecture and new structural forms, painting, evolution of a composite culture.

-Economy : Agricultural Production, rise of urban economy and non-agricultural production, trade and commerce.

18. **The Fifteenth and Early Sixteenth Century-Political Developments and Economy :**

-Rise of Provincial Dynasties : Bengal, Kashmir (Zainul Abedin), Gujarat.

-Malwa, Bahmanids.

-The Vijayanagara Empire.

-Lodis.

-Mughal Empire, first phase : Babur, Humayun.

-The Sur Empire : Sher Shah's administration.

-Portuguese colonial enterprise, Bhakti and Sufi Movements.

19. **The Fifteenth and Early Sixteenth Century- Society and culture :**

-Regional cultures specificities.

-Literary traditions.

-Provincial architectural.

-Society, culture, literature and the arts in Vijayanagara Empire.

20. **Akbar :**

-Conquests and consolidation of empire.

-Establishment of jagir and mansab systems.

-Rajput policy.

-Evolution of religious and social outlook. Theory of Sulh-i-kul and religious policy.

-Court patronage of art and technology.

21. **Mughal Empire in the Seventeenth Century :**

-Major administrative policies of Jahangir, Shahjahan and Aurangzeb.

-The Empire and the Zamindars.

-Religious policies of Jahangir, Shahjahan and Aurangzeb.

-Nature of the Mughal State.

-Late Seventeenth Century crisis and the revolts.

-The Ahom kingdom.

-Shivaji and the early Maratha Kingdom.

22. **Economy and society, in the 16th and 17th Centuries :**

-Population Agricultural and craft production.

-Towns, commerce with Europe through Dutch, English and French companies : a trade revolution.

-Indian mercantile classes. Banking, insurance and credit systems.

-Conditions of peasants, Condition of Women.

-Evolution of the Sikh community and the Khalsa Panth.

23. **Culture during Mughal Empire :**

-Persian histories and other literature

-Hindi and religious literatures.

-Mughal architecture.

-Mughal painting.

-Provincial architecture and painting.

-Classical music.

-Science and technology.

24. **The Eighteenth Century :**

-Factors for the decline of the Mughal Empire.

-The regional principalities: Nizam's Deccan, Bengal, Awadh.

-Maratha ascendancy under the Peshwas.

-The Maratha fiscal and financial system.

-Emergence of Afghan power Battle of Panipat, 1761.

-State of, political, cultural and economic, on eve of the British conquest.

PAPER-II

1. **European Penetration into India :**

   The Early European Settlements; The Portuguese and the Dutch; The English and the French East India Companies; Their struggle for supremacy; Carnatic Wars; Bengal-The conflict between the English and the Nawabs of Bengal; Siraj and the English; The Battle of Plassey; Significance of Plassey.

2. **British Expansion in India :**

   Bengal-Mir Jafar and Mir Kasim; The Battle of Buxar; Mysore; The Marathas; The three Anglo-Maratha Wars; The Punjab.

3. **Early Structure of the British Raj :**

   The Early administrative structure; From diarchy to direct contol; The Regulating Act (1773); The Pitt's India Act (1784); The Charter Act (1833); The Voice of free trade and the changing character of British colonial rule; The English utilitarian and India.

4. **Economic Impact of British Colonial Rule :**

   (a) Land revenue settlements in British India; The Permanent Settlement; Ryotwari Settlement; Mahalwari Settlement; Economic impact of the revenue arrangements; Commercialization of agriculture; Rise of landless agrarian labourers; Impoverishment of the rural society.

   (b) Dislocation of traditional trade and commerce ; De-industrialisation; Decline of traditional crafts; Drain of wealth; Economic transformation of India; Railroad and communication network including telegraph and postal services; Famine and poverty in the rural interior; European business enterprise and its limitations.

5. **Social and Cultural Developments :**

   The state of indigenous education, its dislocation; Orientalist-Anglicist controversy, The introduction of western education in India; The rise

of press, literature and public opinion; The rise of modern vernacular literature; Progress of Science; Christian missionary activities in India.

6. **Social and Religious Reform Movements in Bengal and Other Areas :**

Ram Mohan Roy, The Brahmo Movement; Debendranath Tagore; Iswarchandra Vidyasagar; The Young Bengal Movement; Dayanada Saraswati; The social reform movements in India including Sati, widow remarriage, child marriage etc.; The contribution of Indian renaissance to the growth of modern India; Islamic revivalism-the Feraizi and Wahabi Movements.

7. **Indian Response to British Rule :**

Peasant movement and tribal uprisings in the 18th and 19th centuries including the Rangpur Dhing (1783), the Kol Rebellion (1832), the Mopla Rebellion in Malabar (1841-1920), the Santal Hul (1855), Indigo Rebellion (1859-60), Deccan Uprising (1875) and the Munda Ulgulan (1899-1900); The Great Revolt of 1857 -Origin, character, casuses of failure, the consequences; The shift in the character of peasant uprisings in the post-1857 period; the peasant movements of the 1920s and 1930s.

8. **Factors leading to the birth of Indian Nationalism :**

Politics of Association; The Foundation of the Indian National Congress; The Safety-valve thesis relating to the birth of the Congress; Programme and objectives of Early Congress; the social composition of early Congress leadership; the Moderates and Extremists; The Partition of Bengal (1905); The Swadeshi Movement in Bengal; the economic and political aspects of Swadeshi Movement; The beginning of revolutionary extremism in India.

9. **Rise of Gandhi; Character of Gandhian nationalism :**

Gandhiôs popular appeal; Rowlatt Satyagraha; the Khilafat Movement; the Non-cooperation Movement; National politics from

the end of the Non-cooperation Movement to the beginning of the Civil Disobedience Movement; the two phases of the Civil Disobedience Movement; Simon Commission; The Nehru Report; the Round Table Conferences; Nationalism and the Peasant Movements; Nationalism and Working class movements; Women and Indian youth and students in Indian politics (1885-1947); the election of 1937 and the formation of ministries; Cripps Mission; the Quit India Movement; the Wavell Plan; The Cabinet Mission.

10. **Constitutional Developments in the Colonial India between 1858 and 1935.**

11. **Other strands in the National Movement.**

The Revolutionaries: Bengal, the Punjab, Maharashtra, U.P. the Madras Presidency, Outside India.

The Left ; The Left within the Congress: Jawaharlal Nehru, Subhas Chandra Bose, the Congress Socialist Party; the Communist Party of India, other left parties.

12. **Politics of Separatism; the Muslim League; the Hindu Mahasabha :**

Communalism and the politics of partition; Transfer of power; Independence.

13. **Consolidation as a Nation; Nehru's Foreign Policy :**

India and her neighbours (1947-1964); The linguistic reorganisation of States (1935-1947) ; Regionalism and regional inequality; Integration of Princely States; Princes in electoral politics; the Question of National Language.

14. **Caste and Ethnicity after 1947 :**

Backward Castes and Tribes in post-colonial electoral politics; Dalit movements.

15. **Economic development and political change :**

Land reforms ; the politics of planning and rural reconstruction ; Ecology and environmental policy in post-colonial India ; Progress of Science.

16. **Enlightenment and Modern ideas :**

(i) Major Ideas of Enlightenment : Kant, Rousseau.

(ii) Spread of Enlightenment in the colonies.

(iii) Rise of socialist ideas (up to Marx); spread of Marxian Socialism.

17. **Origins of Modern Politics :**

(i) European States System

(ii) American Revolution and the Constitution

(iii) French Revolution and Aftermath, 1789-1815

(iv) American Civil War with reference to Abraham Lincoln and the abolition of slavery.

(v) British Democratic politics, 1815-1850 : Parliamentary Reformers, Free Traders, Chartists.

18. **Industrialization :**

(i) English Industrial Revolution : Causes and Impact on Society.

(ii) Industrialization in other countries : USA, Germany, Russia, Japan.

(iii) Industrialization and Globalization.

19. **Nation-State System :**

(i) Rise of Nationalism in 19th century.

(ii) Nationalism : State-building in Germany and Italy.

(iii) Disintegration of Empires in the face of the emergence of nationalities across the World.

20. **Imperialism and Colonialism :**

(i) South and South-East Asia.

(ii) Latin America and South Africa.

(iii) Australia.

(iv) Imperialism and free trade: Rise of neo-imperialism.

21. **Revolution and Counter-Revolution :**

(i) 19th Century European revolutions.

(ii) The Russian Revolution of 1917-1921.

(iii) Fascist Counter-Revolution, Italy and Germany.

(iv) The Chinese Revolution of 1949.

22. **World Wars :**

(i) 1st and 2nd World Wars as Total Wars : Societal implications.

(ii) World War I : Causes and Consequences.

(iii) World War II : Causes and Consequences.

23. **The World after World War II :**

(i) Emergence of Two power blocs.

(ii) Emergence of Third World and non-alignment

(iii) UNO and the global disputes.

24. **Liberation from Colonial Rule :**

(i) Latin America-Bolivar.

(ii) Arab World-Egypt.

(iii) Africa-Apartheid to Democracy.

(iv) South-East Asia-Vietnam.

25. **Decolonization and Underdevelopment :**

(i) Factors constraining Development ; Latin America, Africa.

26. **Unification of Europe :**

(i) Post War Foundations ; NATO and European Community.

(ii) Consolidation and Expansion of European Community

(iii) European Union.

27. **Disintegration of Soviet Union and the Rise of the Unipolar World :**

(i) Factors leading to the collapse of Soviet Communism and Soviet Union, 1985-1991.

(ii) Political Changes in East Europe 1989-2001.

(iii) End of the Cold War and US Ascendancy in the World as the lone superpower.

LAW

PAPER-I

Constitutional and administrative Law :

1. Constitution and Constitutionalism : The distinctive features of the Constitution.
2. Fundamental Rights-Public interest litigation; Legal Aid ; Legal services authority.

3. Relationship between Fundamental rights, Directive principles and Fundamental duties.
4. Constitutional Position of the President and relation with the Council of Ministers.
5. Governor and his powers :
6. Supreme Court and the High Courts :
    (a) Appointments and transfer.
    (b) Powers, functions and jurisdiction.
7. Centre, States and local bodies :
    (a) Distribution of legislative powers between the Union and the States.
    (b) Local Bodies.
    (c) Administrative relationship among Union, State and Local Bodies.
    (d) Eminent domain-State property-common property-community property.
8. Legislative powers, privileges and immunities.
9. Services under the Union and the States :
    (a) Recruitment and conditions of services ; Constitutional safeguards ; Administrative tribunals.
    (b) Union Public Service Commission and State Public Service Commissions-Power and functions.
    (c) Election Commission-Power and functions.
10. Emergency provisions.
11. Amendment of the Constitution.

12. Principle of Natural Justice-Emerging trends and judicial approach.
13. Delegated legislation and its constitutionality.
14. Separation of powers and constitutional governance.
15. Judicial review of administrative action.
16. Ombudsman: Lokayukta, Lokpal etc.

International Law :

1. Nature and Definition of International Law.
2. Relationship between International Law and Municipal Law.
3. State Recognition and State Succession.
4. Law of the sea: Inland Waters, Territorial Sea, Contiguous Zone, Continental Shelf, Exclusive Economic Zone and High Seas.
5. Individuals: Nationality, statelessness; Human Rights and procedures available for their enforcement.
6. Territorial jurisdiction of States, Extradition and Asylum.
7. Treaties : Formation, application, termination and reservation.
8. United Nations : Its principal organs, powers and functions and reform.
9. Peaceful settlement of disputes-different modes.
10. Lawful recourse to force : aggressions, self-defence, intervention.
11. Fundamental principles of international humanitarian law-International conventions and contemporary developments.
12. Legality of the use of nuclear weapons ; ban on testing of nuclear weapons ; Nuclear non-proliferation treaty, CTST.
13. International Terrorism, State sponsored terrorism, Hijacking, International Criminal Court.
14. New International Economic Order and Monetary Law : WTO, TRIPS, GATT, IMF, World Bank.

15. Protection and Improvement of the Human Environment : International Efforts.

PAPER-II

Law of Crimes

1. General principles of Criminal liability : mens rea and actus reus, mens rea in statutory offences.
2. Kinds of punishment and emerging trends as to abolition of capital punishment.
3. Preparations and criminal attempt.
4. General exceptions.
5. Joint and constructive liability.
6. Abetment.
7. Criminal conspiracy.
8. Offences against the State.
9. Offences against public tranquility.
10. Offences against human body.
11. Offences against property.
12. Offences against women.
13. Defamation.
14. Prevention of Corruption Act, 1988.
15. Protection of Civil Rights Act, 1955 and subsequent legislative developments.
16. Plea bargaining.

Law of Torts

1. Nature and definition.
2. Liability based upon fault and strict liability ; Absolute liability.
3. Vicarious liability including State Liability.
4. General defences.
5. Joint tort fessors.
6. Remedies.
7. Negligence.
8. Defamation.
9. Nuisance.
10. Conspiracy.
11. False imprisonment.
12. Malicious prosecution.
13. Consumer Protection Act, 1986.

Law of Contracts and Mercantile Law

1. Nature and formation of contract/E-contract.
2. Factors vitiating free consent.
3. Void, voidable, illegal and unenforceable agreements.
4. Performance and discharge of contracts.
5. Quasi-contracts.
6. Consequences of breach of contract.
7. Contract of indemnity, guarantee and insurance.
8. Contract of agency.

9. Sale of goods and hire purchase.
10. Formation and dissolution of partnership.
11. Negotiable Instruments Act, 1881.
12. Arbitration and Conciliation Act, 1996.
13. Standard form contracts.

Contemporary Legal Developments

1. Public Interest Litigation.
2. Intellectual property rights-Concept, types/ prospects.
3. Information Technology Law including Cyber Laws-Concept, purpose/prospects.
4. Competition Law-Concept, purpose/prospects.
5. Alternate Dispute Resolution-Concept, types/ prospects.
6. Major statutes concerning environmental law.
7. Right to Information Act.
8. Trial by media.

MANAGEMENT

The candidate should make a study of the concept of development of Management as science and art drawing upon the contributions of leading thinkers of management and apply the concepts to the real life of government and business decision-making keeping in view the changes in the strategic and operative environment.

PAPER-I

1. **Managerial Function and Process :**

Concept and foundations of management, Evolution of Management Thoughts ; Managerial Functions-Planning, Organizing, Controlling ;

Decision-making; Role of Manager, Managerial skills ; Entrepreneurship ; Management of innovation; Managing in a global environment, Flexible Systems Management ; Social responsibility and managerial ethics ; Process and customer orientation ; Managerial processes on direct and indirect value chain.

2. **Organisational Behaviour and Design :**

Conceptual model of organization behaviour; The individual processes-personality, values and attitude, perception, motivation, learning and reinforcement, work stress and stress management; The dynamics of Organization behaviour-power and politics, conflict and negotiation, leadership process and styles, communication; The Organizational Processes-decision-making, job design; Classical, Neoclassical and Contingency approaches to organizational design; Organizational theory and design-Organizational culture, managing cultural diversity, learning Organization; Organizational change and development; Knowledge Based Enterprise-systems and processes; Networked and virtual organizations.

3. **Human Resource Management :**

HR challenges; HRM functions; The future challenges of HRM; Strategic Management of human resources; Human resource planning; Job analysis; Job evaluation, Recruitment and selection; Training and development; Promotion and transfer; Performance management; Compensation management and benefits; Employee morale and productivity; Management of Organizational climate and Industrial relations; Human resources accounting and audit; Human resource information system; International human resource management.

4. **Accounting for Managers :**

Financial accounting-concept, importance and scope, generally accepted accounting principles, preparation of financial statements

with special reference to analysis of a balance sheet and measurment of business income, inventory valuation and depreciation, financial statement analysis, fund flow analysis, the statement of cash flows; Management accounting concept, need, imporance and scope; Cost accounting-records and processes, cost ledger and control accounts, reconciliation and integration between financial and cost accounts; Overhead cost and control, Job and process costing, Budget and budgetary control, Performance budgeting, Zero-base budgeting, relevant costing and costing for decision-making, standard costing and variance analysis, marginal costing and absorption costing.

5. **Financial Management :**

Goal of Finance Function. Concepts of value and return. Valuation of bonds and Shares; Management of working capital : Estimation and Financing; Management of cash, receivables, inventory and current liabilities; Cost of capital ; Capital budgeting; Financial and operating leverage; Design of capital structure : theories and practices ; Shareholder value creation: dividend policy, corporate financial policy and strategy, management of corporate distress and restructuring strategy; Capital and money markets: institutions and instruments; Leasing hire purchase and venture capital; Regulation of capital market; Risk and return: portfolio theory; CAPM; APT; Financial derivatives: option, futures, swap; Recent reforms in financial sector.

6. **Marketing Management :**

Concept, evolution and scope; Marketing strategy formulation and components of marketing plan; Segmenting and targeting the market; Positioning and differentiating the market offering; Analyzing competition; Analyzing consumer markets; Industrial buyer behaviour; Market research; Product strategy; Pricing strategies; Designing and managing Marketing channels; Integrated marketing communications; Building customer satisfaction, Value and retention; Services and

non-profit marketing; Ethics in marketing; Consumer protection; Internet marketing; Retail management; Customer relationship management; Concept of holistic marketing.

PAPER-II

1. **Quantitative Techniques in Decision-making :**

Descriptive statistics-tabular, graphical and numerical methods, introduction to probability, discrete and continuous probability distributions, inferential statistics-sampling distributions, central limit theorem, hypothesis testing for differences between means and proportions, inference about population variances, Chisquare and ANOVA, simple correlation and regression, time series and forecasting, decision theory, index numbers; Linear programming-problem formulation, simplex method and graphical solution, sensitivity analysis.

2. **Production and Operations Management :**

Fundamentals of operations management; Organizing for production; Aggregate production planning, capacity planning, plant design: process planning, plant size and scale of operations, Management of facilities; Line balancing; Equipment replacement and maintenance; Production control; Supply, chain management-vendor evaluation and audit; Quality management; Statistical process control, Six Sigma; Flexibility and agility in manufacturing systems; World class manufaturing; Project management concepts, R&D management, Management of service operations; Role and importance of materials management, value analysis, make or buy decision; Inventory control, MRP; Waste management.

3. **Management Information System :**

Conceptual foundations of information systems ; Information theory; Information resource management ; Types of information Systems ; Systems Development-Overview of Systems and Design ; System

Development management life-cycle, Designing online and distributed environments; Implementation and control of project; Trends in information technology; Managing data resources-Organising data. DSS and RDBMS; Enterprise Resource Planning (ERP), Expert systems, e-Business architecture, e-Governance; Information systems planning, Flexibility in information systems; User involvement; Evaluation of information systems.

4. **Government Business Interface :**

State participation in business, Interaction between Government, Business and different Chambers of Commerce and Industry in India; Governmentôs Policy with regard to Small Scale Industries; Government clearances for establishing a new enterprise; Public Distribution System; Government control over price and distribution; Consumer Protection Act (CPA) and The Role of Voluntary Organizations in protecting consumers' rights; New Industrial Policy of the Government : liberalization, deregulation and privatisation; Indian planning system; Government policy concerning development of Backward areas/regions; The Responsibilities of the business as well as the Government to protect the environment; Corporate Governance; Cyber Laws.

5. **Strategic Cost Management :**

Business policy as a field of study; Nature and scope of strategic management, Strategic intent, vision, objectives and policies; Process of strategic planning and implementation; Environmental analysis and internal analysis; SWOT analysis; Tools and techniques for strategic analysis-Impact matrix: The experience curve, BCG matrix, GEC mode, Industry analysis, Concept of value chain; Strategic profile of a firm; Framework for analysing competition; Competitive advantage of a firm; Generic competitive strategies; Growth strategies-expansion, integration and diversification; Concept of core competence, Strategic flexibility; Reinventing strategy; Strategy and

structure; chief Executive and Board; turnaround management; Management of strategic change; Strategic alliances, Mergers and Acquisitions; Strategy and corporate evolution in the Indian context.

6. **International Business :**

International Business Environment : Changing composition of trade in goods and services; India's Foreign Trade: Policy and trends; Financing of International trade; Regional Economic Cooperation; FTAs; Internationalisation of service firms; International production; Operation Management in International companies; International Taxation; Global competitiveness and technological developments; Global E-Business; Designing global organisational structure and control; Multicultural management; Global business strategy; Global marketing strategies; Export Management; Export-Import procedures; Joint Ventures; Foreign Investment: Foreign direct investment and foreign portfolio investment; Cross-border Mergers and Acquisitions; Foreign Exchange Risk Exposure Management; World Financial Markets and International Banking; External Debt Management; Country Risk Analysis.

MATHEMATICS

PAPER-I

(1) **Linear Algebra :**

Vector spaces over R and C, linear dependence and independence, subspaces, bases, dimensions, Linear transformations, rank and nullity, matrix of a linear transformation.

Algebra of Matrices; Row and column reduction, Echelon form, congruence's and similarity; Rank of a matrix; Inverse of a matrix; Solution of system of linear equations; Eigenvalues and eigenvectors, characteristic polynomial, Cayley-Hamilton theorem, Symmetric, skew-symmetric, Hermitian, skew-Hermitian, orthogonal and unitary matrices and their eigenvalues.

(2) **Calculus :**

Real numbers, functions of a real variable, limits, continuity, differentiability, mean-value theorem, Taylor's theorem with remainders, indeterminate forms, maxima and minima, asymptotes; Curve tracing; Functions of two or three variables; Limits, continuity, partial derivatives, maxima and minima, Lagrange's method of multipliers, Jacobian.

Riemann's definition of definite integrals; Indefinite integrals; Infinite and improper integral; Double and triple integrals (evaluation techniques only); Areas, surface and volumes.

(3) **Analytic Geometry :**

Cartesian and polar coordinates in three dimensions, second degree equations in three variables, reduction to Canonical forms; straight lines, shortest distance between two skew lines, Plane, sphere, cone, cylinder, paraboloid, ellipsoid, hyperboloid of one and two sheets and their properties.

(4) **Ordinary Differential Equations :**

Formulation of differential equations; Equations of first order and first degree, integrating factor; Orthogonal trajectory; Equations of first order but not of first degree, Clairaut's equation, singular solution.

Second and higher order linear equations with constant coefficients, complementary function, particular integral and general solution.

Section order linear equations with variable coefficients, Euler-Cauchy equation; Determination of complete solution when one solution is known using method of variation of parameters.

Laplace and Inverse Laplace transforms and their properties, Laplace transforms of elementary functions. Application to initial value problems for 2nd order linear equations with constant coefficients.

(5) **Dynamics and Statics :**

Rectilinear motion, simple harmonic motion, motion in a plane, projectiles; Constrained motion; Work and energy, conservation of energy; Kepler's laws, orbits under central forces.

Equilibrium of a system of particles; Work and potential energy, friction, Common catenary; Principle of virtual work; Stability of equilibrium, equilibrium of forces in three dimensions.

(6) **Vector Analysis :**

Scalar and vector fields, differentiation of vector field of a scalar variable; Gradient, divergence and curl in cartesian and cylindrical coordinates; Higher order derivatives; Vector identities and vector equation.

Application to geometry : Curves in space, curvature and torsion; Serret-Furenet's formulae.

Gauss and Stokes' theorems, Green's indentities.

PAPER-II

(1) **Algebra :**

Groups, subgroups, cyclic groups, cosets, Lagrange's Theorem, normal subgroups, quotient groups, homomorphism of groups, basic isomorphism theorems, permutation groups, Cayley's theorem.

Rings, subrings and ideals, homomorphisms of rings; Integral domains, principal ideal domains, Euclidean domains and unique factorization domains; Fields, quotient fields.

(2) **Real Analysis :**

Real number system as an ordered field with least upper bound property; Sequences, limit of a sequence, Cauchy sequence, completeness of real line; Series and its convergence, absolute and

conditional convergence of series of real and complex terms, rearrangement of series. Continuity and uniform continuity of functions, properties of continuous functions on compact sets.

Riemann integral, improper integrals; Fundamental theorems of integral calculus.

Uniform convergence, continuity, differentiability and integrability for sequences and series of functions; Partial derivatives of functions of several (two or three) variables, maxima and minima.

(3) **Complex Analysis :**

Analytic function, Cauchy-Riemann equations, Cauchy's theorem, Cauchy's integral formula, power series, representation of an analytic function, Taylor's series; Singularities; Laurent's series; Cauchy's residue theorem; Contour integration.

(4) **Linear Programming :**

Linear programming problems, basic solution, basic feasible solution and optimal solution; Graphical method and simplex method of solutions; Duality.

Transportation and assignment problems.

(5) **Partial Differential Equations :**

Family of surfaces in three dimensions and formulation of partial differential equations; Solution of quasilinear partial differential equations of the first order, Cauchy's method of characteristics ; Linear partial differential equations of the second order with constant coefficients, canonical form; Equation of a vibrating string, heat equation, Laplace equation and their solutions.

(6) **Numerical Analysis and Computer Programming :**

Numerical methods: Solution of algebric and transcendental equations of one variable by bisection, Regula-Falsi and Newton-Raphson methods, solution of system of linear equations by Gaussian

Elimination and Gauss-Jorden (direct), Gauss-Seidel (iterative) methods. Newton's (forward and backward) and interpolation, Lagrange's interpolation.

Numerical integration: Trapezoidal rule, Simpson's rule, Gaussian quadrature formula.

Numerical solution of ordinary differential equations : Eular and Runga Kutta methods.

Computer Programming : Binary system; Arithmetic and logical operations on numbers; Octal and Hexadecimal Systems; Conversion to and from decimal Systems; Algebra of binary numbers.

Elements of computer systems and concept of memory; Basic logic gates and truth tables, Boolean algebra, normal forms.

Representation of unsigned integers, signed integers and reals, double precision reals and long integers.

Algorithms and flow charts for solving numerical analysis problems.

(7) **Mechanics and Fluid Dynamics :**

Generalised coordinates; D'Alembert's principle and Lagrange's equations; Hamilton equations; Moment of inertia; Motion of rigid bodies in two dimensions.

Equation of continuity; Euler's equation of motion for inviscid flow; Stream-lines, path of a particle; Potential flow; Two-dimensional and axisymmetric motion; Sources and sinks, vortex motion; Navier-Stokes equation for a viscous fluid.

MECHANICAL ENGINEERING

PAPER-I

1. **Mechanics :**

1.1 **Mechanics of Rigid Bodies :**

Equations of equilibrium in space and its application; first and second moments of area; simple problems on friction; kinematics of particles for plane motion; elementary particle dynamics.

1.2 **Mechanics of Deformable Bodies :**

Generalized Hooke's law and its application; design problems on axial stress, shear stress and bearing stress; material properties for dynamic loading; bending shear and stresses in beams ; determination of principle stresses and strains-analytical and graphical; compound and combined stresses ; bi-axial stresses-thin walled pressure vessel ; material behaviour and design factors for dynamic load ; design of circular shafts for bending and torsional load only ; deflection of beam for statically determinate problems ; theories of failure.

2. **Engineering Materials :**

Basic concepts on structure of solids, common ferrous and non-ferrous materials and their applications ; heat-treatment of steels ; non-metalsplastics, cermics, composite materials and nano-materials.

3. **Theory of Machines :**

Kinematic and dynamic analysis of plane mechanisms. Cams, Gears and empicyclie gear trains, flywheels, governors, balancing of rigid rotors, balancing of single and multicy-linder engines, linear vibration analysis of mechanical systems (single degree of freedom), Critical speeds and whirling of shafts.

4. **Manufacturing Science :**

4.1 **Manufacturing Process :**

Machine tool engineering - Merhant's force analysis: Taylorôs tool life equation; conventional machining; NC and CNC machining process; jigs and fixtures.

Non-conventional machining-EDM, ECM, ultrasonic, water jet machining etc.; application of lasers and plasmas; energy rate calculations.

Forming and welding processes-standard processes.

Metrology-concept of fits and tolerances ; tools and guages ; comparators ; inspection of length ; position ; profile and surface finish.

4.2 **Manufacturing Management :**

System design : factory location-simple OR models; plant layout-methods based ; applications of engineering economic analysis and break-even analysis for product selection, process selection and capacity planning ; predetermined time standards.

System planning ; forecasting methods based on regression and decomposition, design and blancing of multi model and stochastic assembly lines ; inventory management-probablistic inventory models for order time and order quanitity determination ; JIT systems ; strategic sourcing ; managing inter plant logistics.

System operations and control : Scheduling algorithms for job shops ; applications of statistical methods for product and process quality control applications of control charts for mean, range, percent defective, number of defectives and defects per unit ; quality cost systems ; management of resources, organizations and risks in projects.

System improvement: Implementation of systems, such as total quality management, developing and managing flexible, lean and agile Organizations.

PAPER-II

1. **Thermodynamics, Gas Dynamics Turbine :**

1.1 Basic concept of First-law and Second law of Thermodynamics; concept of entropy and reversibility; availability and unavailability and irreversibility.

1.2 Classification and properties of fluids; incompressible and compressible fluids flows ; effect of Mach number and compressibility; continuity momentum and energy equations; normal and oblique shocks; one dimensional isentropic flow ; flow or fluids in duct with frictions that transfer.

1.3 Flow through fans, blowers and compressors ; axial and centrifugal flow configuration; design of fans and compressors ; single problems compresses and turbine cascade; open and closed cycle gas turbines ; work done in the gas turbine; reheat and regenerators.

2. **Heat Transfer :**

2.1 Conduction heat transfer-general conduction equation-Laplace, Poisson and Fourier equations ; Fourier law of conduction; one dimensional steady state heat conduction applied to simple wall, solid and hollow cylinder and spheres.

2.2 Convection heat transfer-Newton's law of convection; free and forces convection ; heat transfer during laminar and turbulent flow of an incompressible fluid over a flat plate; concepts of Nusselt number, hydrodynamic and thermal boundary layer their thickness ; Prandtl number ; analogy between heat and momentum transfer-Reynolds, Colbum, Prandtl analogies; heat transfer during laminar and turbulent flow through horizontal tubes; free convection from horizontal and vertical plates.

2.3 Black body radiation-basic radiation laws such as Stefan-boltzman, Planck distribution, Weinôs displacement etc.

2.4 Basic heat exchanger analysis; classification of heat exchangers.

3. **Engines :**

3.1 Classification, themodynamic cycles of operation; determination of break power, indicated power, mechanical efficiency, heat balance sheet, interpretation of performance characteristics, petrol, gas and diesel engines.

3.2 Combustion in SI and CI engines, normal and abnormal combustion; effect of working parameters on knocking, reduction of knocking; Forms of combustion chamber for SI and CI engines; rating of fuels; additives; emission.

3.3 Different systems of IC engines-fuels; lubricating; cooling and transmission systems. Alternate fuels in IC engines.

4. **Steam Engineering :**

4.1 Steam generation-modified Ranking cycle analysis ; Modern steam boilers; steam at critical and supercritical pressures; draught equipment; natural and artificial draught; boiler fuels solid, liquid and gaseous fuels. Steam turbines- Principle; types; compounding; impulse and reaction turbines; axial thrust.

4.2 Steam nozzles-flow of steam in convergent and divergent nozzle pressure at throat for maximum discharge with different initial steam conditions such as wet, saturated and superheated, effect of variation of back pressure ; supersaturated flow of steam in nozzles, Wilson line.

4.3 Rankine cycle with internal and external irreversibility ; reheat factor ; reheating and regeneration, methods of governing ; back pressure and pass out turbines.

4.4 Steam power plants-combined cycle power generation ; heat recovery steam generators (HRSG) fired and unfired, co-generation plants.

5. **Refrigeration and Air-conditioning :**

5.1 Vapour compression refrigeration cycle-cycle on p-H & T-s diagrams ; ecofriendly refrigerants-R 134a. 123 ; Systems like evaporators, condensers, compressor, expansion devices. Simple vapour absorption systems.

5.2 Psychrometry-properties; processes; charts; sensible heating and cooling; humidification and dehumidification effective temperature; air-conditioning load calculation; simple duct design.

MEDICAL SCIENCE

PAPER-I

1. **Human Anatomy :**

Applied anatomy including blood and nerve supply of upper and lower limbs and joints of shoulder, hip and knee.

Gross anatomy, blood supply and lymphatic drainage of tongue, thyroid, mammary gland, stomach, liver, prostate, gonads and uterus.

Applied anatomy of diaphragm, perineum and inguinal region.

Clinical anatomy of kidney, urinary bladder, uterine tubes, vas deferens.

Embryology : Placenta and placental barrier. Development of heart, gut, kidney. uterus, ovary, testis and their common congenital abnormalities.

Central and Peripheral Autonomic Nervous System :

Gross and clinical anatomy of ventricles of brain, circulation of cerebrospinal fluid; Neural pathways and lesions of cutaneous sensations, hearing and vision; Cranial nerves distribution and clinical significance; Components of autonomic nervous system.

2. **Human Physiology :**

Conduction and transmission of impulse, mechanism of contraction, neuromuscular transmission, reflexes, control of equilibrium, posture and muscle tone, descending pathways, functions of cerebellum, basal ganglia, Physiology of sleep and consciousness.

Endocrine System : Mechanism of action of hormones; formation, secretion, transport, metabolism, function and regulation of secretion of pancreas and pituitary gland.

Physiology of Reproductive System : Pregnancy menstrual cycle, lactation, pregnancy.

Blood : Development, regulation and fate of blood cells.

Cardio-vascular, cardiac output, blood pressure, regulation of cardiovascular functions.

3. **Biochemistry :**

Organ function tests-liver, kidney, thyroid Protein synthesis.

Vitamins and minerals. Restriction fragment length. polymorphism (RFLP). Polymerase chain reaction (PCR). Radio-immunoassays (RIA).

4. **Pathology :**

Inflammation and repair, disturbances of growth and cancer, Pathogenesis and histopathology of rheumatic and ischaemic heart disease and diabetes mellitus. Differentiation between benign, malignant, primary and metastatic malignancies, Pathogenesis and histopathology of bronchogenic carcinoma, carcinoma breast, oral cancer, cancer cervix, leukemia, Etiology, pathogenesis and histopathology of-cirrhosis liver, glomerulonephritis, tuberculosis, acute osteomyelitis.

5. **Microbiology :**

Humoral and cell mediated immunity.

Diseases caused by and laboratory diagnosis ofð

* Meningococcus, Saimonella
* Shigella, Herpes, Dengue, Polio
* HIV/AIDS, Malaria, E. Histolytica, Giardia
* Candida, Cryptococcus, Aspergillus.

6. **Pharmacology :**

Mechanism of action and side effects of the following drugs :

* Antipyretics and analgesics, Antibiotics,
* Antimalaria, Antikala-azar, Antidiabetics,
* Antihypertensive, Antidiuretics, General and cardiac vasodilators, Antiviral, Antiparasitic, Antifungal, Immunosuppressants,
* Anticancer.

7. **Forensic Medicine and Toxicology :**

Forensic examination of injuries and wounds; Examination of blood and seminal stains; Poisoning, sedative overdose, hanging, drowning, burns, DNA and finger print study.

PAPER-II

1. **General Medicine :**

Etiology, clinical features, diagnosis and principles of management (including prevention) of-Typhoid, Rabies, AIDS, Dengue, Kala-azar, Japanese Encephalitis.

Etiology, clinical features, diagnosis and principles of management of :

Ischaemic heart disease, pulmonary embolism. Bronchial asthma.

Pleural effusion, tuberculosis, Malabsorption syndromes; acid peptic diseases, Viral hepatitis and cirrhosis of liver.

Glomerulonephritis and pyelonephritis, renal failure, nephrotic syndrome, renovascular hypertension, complications of diabetes mellitus, coagulation disorders, leukaemia, Hypo and hyper thyrodism, meningitis and encephalitis.

Imaging in medical problems, ultrasound, echo-cardiogram, CT scan, MRI.

Anxiety and Depressive Psychosis and schizophrenia and ECT.

2. **Paediatrics :**

Immunization, Baby friendly hospital, congenital cyanotic heart disease, respiratory distress syndrome, broncho- pneumonias, kernicterus. IMNCI classification and management, PEM grading and management. ARI and Diarrhea of under five and their management.

3. **Dermatology :**

Psoriasis, Allergic dermatitis, scabies, eczema, vitiligo, Stevan Johnson's syndrome, Lichen Planus.

4. **General Surgery :**

Clinical features, causes, diagnosis and principles of management of cleft palate, harelip.

Laryngeal tumour, oral and esophageal tumours.

Peripheral arterial diseases, varicose veins, coarctation of aorta.

Tumours of Thyroid, Adrenal, Glands.

Abscess cancer, fibroadenoma and adenosis of breast.

Bleeding peptic ulcer, tuberculosis of bowel, ulcerative colitis, cancer stomach.

Renal mass, cancer prostatie.

Haemothorax, stones of Gall bladder, Kidney, Ureter and Urinary Bladder.

Management of surgical conditions of Rectum, Anus and Anal canal, Gall bladder and Bile ducts.

Splenomegaly, cholecystitis, portal hypertension, liver abscess, peritonitis, carcinoma head of pancreas.

Fractures of spine, Colles' fracture and bone tumors. Endoscopy.

Laprascopic Surgery.

5. **Obstetrics and Gynaecology including Family Planning :**

Diagnosis of pregnancy.

Labour management, complications of 3rd stage, Antepartum and postpartum hemorrhage, resuscitation of the newborn, Management of abnormal life and difficult labour. Management of small for date or premature newborn.

Diagnosis and management of anemia. Preeclampsia and Toxaemias of pregnancy, Management of Post-menopausal Syndrome.

Intra-uterine devices, pills, tubectomy and vasectomy. Medical termination of pregnancy including legal aspects.

Cancer cervix.

Leucorrhoea, pelvic pain; infertility, dysfunctional uterine bleeding (DUB), amenorrhoea, Fibroid and prolapse of uterus.

6. **Community Medicine (Preventive and Social Medicine) :**

Principles, methods approach and measurements of Epidemiology.

Nutrition, nutritional diseases/diorders and Nutrition

Programmes.

Health information Collection, Analysis and

Presentation.

Objectives, components and critical analysis of National programmes for control/eradication of :

Malaria, Kala-azar, Filaria and Tuberculosis, HIV/AIDS, STDs and Dengue.

Critical appraisal of Health care delivery system.

Health management and administration; Techniques, Tools, Programme Implementation and Evaluation.

Objectives, Components, Goals and Status of Reproductive and Child Health, National Rural Health Mission and Millennium Development Goals.

Management of hospital and industrial waste.

PHILOSOPHY

PAPER-I

History and Problems of Philosophy

1. Plato and Aristotle : Ideas ; Substance; Form and Matter; Causation; Actuality and Potentiality.

2. Rationalism (Descartes, Spinoza, Leibniz) ; Cartesian Method and Certain Knowledge; Substance ; God; Mind-Body Dualism; Determinism and Freedom.

3. Empiricism (Locke, Berkeley, Hume) : Theory of Knowledge; Substance and Qualities; Self and God; Scepticism.

4. Kant: Possibility of Synthetic a priori Judgments ; Space and Time; Categories; Ideas of Reason ; Antinomies ; Critique of Proofs for the Existence of God.

5. Hegel : Dialectical Method; Absolute Idealism.

6. Moore, Russell and Early Wittgenstein : Defence of Commonsense; Refutation of Idealism; Logical Atomism; Logical Constructions; Incomplete Symbols; Picture Theory of Meaning; Sying and Showing.

7. Logical Positivism : Verification Theory of Meaning; Rejection of Metaphysics; Linguistic Theory of Necessary Propositions.

8. Later Wittgenstein : Meaning and Use; Language-games; Critique of Private Language.

9. Phenomenology (Husserl): Method; Theory of Essences; Avoidance of Psychologism.

10. Existentialism (Kierkegaard, Sarte, Heidegger): Existence and Essence; Choice, Responsibility and Authentic Existence; Being-in-the-world and Temporality.

11. Quine and Strawson : Critique of Empiricism; Theory of Basic Particulars and Persons.

12. Carvaka : Theory of Knowlegde; Rejection of Transcendent Entities.

13. Jainism : Theory of Reality; Saptabhanginaya; Bondage and Liberation.

14. Schools of Buddhism : Prat Ityasamutpada; Ksanikavada, Nairatmyavada.

15. Nyaya-Vaiesesika : Theory of Categories; Theory of Appearance; Theory of Pramana; Self, Liberation; God; Proofs for the Existence of God; Theory of Causation; Atomistic Theory of Creation.

16. Samkhya ; Prakrit ; Purusa ; Causation; Liberation.

17. Yoga ; Citta ; Cittavrtti; Klesas ; Samadhi; Kaivalya.

18. Mimamsa: Theory of Knowlegde.

19. Schools of Vedanta : Brahman; Isvara; Atman; Jiva; Jagat; Maya; Avida; Adhyasa; Moksa; Aprthaksiddhi; Pancavidhabheda.

20. Aurobindo: Evolution, Involution; Integral Yoga.

PAPER-II

Socio-Political Philosophy

1. Social and Political ldeals : Equality, Justice, Liberty.

2. Sovereignty : Austin, Bodin, Laski, Kautilya.

3. Individual and State : Rights; Duties and Accountability.

4. Forms of Government : Monarchy; Theocracy and Democracy.

5. Political Ideologies: Anarchism; Marxism and Socialism.

6. Humanism; Secularism; Multi-culturalism.

7. Crime and Punishment : Corruption, Mass Violence, Genocide, Capital Punishment.

8. Development and Social Progress.

9. Gender Discrimination : Female Foeticide, Land and Property Rights; Empowerment.

10. Caste Discrimination : Gandhi and Ambedkar.

Philosophy of Religion :

1. Notions of God : Attributes; Relation to Man and the World. (Indian and Western).

2. Proofs for the Existence of God and their Critique (Indian and Western).

3. Problem of Evil.

4. Soul : Immortality; Rebirth and Liberation.

5. Reason, Revelation and Faith.

6. Religious Experience : Nature and Object (Indian and Western).

7. Religion without God.

8. Religion and Morality.

9. Religious Pluralism and the Problem of Absolute Truth.

10. Nature of Religious Language : Analogical and Symbolic; Cognitivist and Non-cognitive.

PHYSICS

PAPER-I

1. **(a) Mechanics of Particles :**

Laws of motion; conservation of energy and momentum, applications to rotating frames, centripetal and Coriolis accelerations; Motion under a central force; Conservation of angular momentum, Kepler's laws; Fields and potentials; Gravitational field and potential due to spherical bodies, Gauss and Poisson equations, gravitational self-energy; Two-body problem; Reduced mass; Rutherford scattering; Centre of mass and laboratory reference frames.

(b) **Mechanics of Rigid Bodies :**

System of particles; Centre of mass, angular momentum, equations of motion; Conservation theorems for energy, momentum and angular momentum; Elastic and inelastic collisions; Rigid Body; Degrees of freedom, Euler's theorem, angular velocity, angular momentum, moments of inertia, theorems of parallel and perpendicular axes, equation of motion for rotation ; Molecular rotations (as rigid bodies); Di and tri-atomic molecules; Precessional motion; top, gyroscope.

(c) **Mechanics of Continuous Media :**

Elasticity, Hooke's law and elastic constants of isotropic solids and their inter-relation; Streamline (Laminar) flow, viscosity, Poiseuille's equation, Bernoulli's equation, Stokes' law and applications.

(d) **Special Relativity :**

Michelson-Morely experiment and its implications; Lorentz transformations length contraction, time dilation, addition of relativistic velocities, aberration and Doppler effect, mass-energy relation, simple applications to a decay process. Four dimensional momentum vector; Covariance of equations of physics.

2. **Waves and Optics :**

(a) **Waves :**

Simple harmonic motion, damped oscillation, forced oscillation and resonance; Beats; Stationary waves in a string; Pulses and wave packets; Phase and group velocities; Reflection and refraction from Huygens' principle.

(b) **Geometrial Optics :**

Laws of reflection and refraction from Fermat's principle; Matrix method in paraxial optic-thin lens formula, nodal planes, system of two thin lenses, chromatic and spherical aberrations.

(c) **Interference :**

Interference of light -Young's experiment, Newton's rings, interference by thin films, Michelson interferometer; Multiple beam interference and Fabry Perot interferometer.

(d) **Diffraction :**

Fraunhofer diffraction - single slit, double slit, diffraction grating, resolving power; Diffraction by a circular aperture and the Airy pattern; Fresnel diffraction: half-period zones and zone plates, circular aperture.

(e) **Polarisation and Modern Optics :**

Production and detection of linearly and circularly polarized light; Double refraction, quarter wave plate; Optical activity; Principles of fibre optics, attenuation; Pulse dispersion in step index and parabolic index fibres; Material dispersion, single mode fibers; Lasers-Einstein A and B coefficients. Ruby and He-Ne lasers. Characteristics of laser light-spatial and temporal coherence; Focusing of laser beams. Three-level scheme for laser operation; Holography and simple applications.

3. **Electricity and Magnetism :**

(a) **Electrostatics and Magnetostatics :**

Laplace and Poisson equations in electrostatics and their applications; Energy of a system of charges, multipole expansion of scalar potential; Method of images and its applications. Potential and field due to a dipole, force and torque on a dipole in an external field; Dielectrics, polarisation. Solutions to boundary-value problems-conducting and dielectric spheres in a uniform electric field; Magnetic shell, uniformly magnetised sphere; Ferromagnetic materials, hysteresis, energy loss.

(b) **Current Electricity :**

Kirchhoffôs laws and their applications. Biot-Savart law, Ampere's law, Faraday's law, Lenz' law. Self-and mutual-inductances; Mean and rms values in AC circuits; DC and AC circuits with R, L and C components; Series and parallel resonance; Quality factor; Principle of transformer.

4. **Electromagnetic Waves and Blackbody Radiation :**

Displacement current and Maxwell's equations; Wave equations in vacuum, Poynting theorem; Vector and scalar potentials; Electromagnetic field tensor, covariance of Maxwell's equations; Wave equations in isotropic dielectrics, reflection and refraction at the boundary of two dielectrics; Fresnel's relations; Total internal

reflection; Normal and anomalous dispersion; Rayleigh scattering; Blackbody radiation and Planck 's radiation law- Stefan-Boltzmann law, Wienôs displacement law and Rayleigh-Jeans law.

5. **Thermal and Statistical Physics :**

(a) **Thermodynamics :**

Laws of thermodynamics, reversible and irreversible processes, entropy; Isothermal, adiabatic, isobaric, isochoric processes and entropy changes; Otto and Diesel engines, Gibbs' phase rule and chemical potential; Van der Waals equation of state of a real gas, critical constants; Maxwell-Boltzmann distribution of molecular velocities, transport phenomena, equipartition and virial theorems; Dulong-Petit, Einstein, and Debye's theories of specific heat of solids; Maxwell relations and application; Clausius-Clapeyron equation. Adiabatic demagnetisation, Joule-Kelvin effect and liquefaction of gases.

(b) **Statistical Physics :**

Macro and micro states, statistical distributions, Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac Distributions, applications to specific heat of gases and blackbody radiation; Concept of negative temperatures.

PAPER-II

1. **Quantum Mechanics :**

Wave-particle duality; Schroedinger equation and expectation values; Uncertainty principle; Solutions of the one-dimensional Schroedinger equation for free particle (Gaussian wave-packet), particle in a box, particle in a finite well, linear harmonic oscillator; Reflection and transmission by a step potential and by a rectangular barrier; Particle in a three dimensional box, density of states, free electron theory of metals; Angular momentum; Hydrogen atom ; Spin half particles, properties of Pauli spin matrices.

2. **Atomic and Molecular Physics :**

Stern-Gerlach experiment, electron spin, fine structure of hydrozen atom; L-S coupling, J-J coupling; Spectroscopic notation of atomic states; Zeeman effect; Franck-Condon principle and applications; Elementary theory of rotational, vibrational and electronic spectra of diatomic molecules; Raman effect and molecular structure; Laser Raman spectroscopy; Importance of neutral hydrogen atom, molecular hydrogen and molecular hydrogen ion in astronomy. Fluorescence and Phosphorescence; Elementary theory and applications of NMR and EPR; Elementary ideas about Lamb shift and its significance.

3. **Nuclear and Particle Physics :**

Basic nuclear properties-size, binding energy, angular momentum, parity, magnetic moment; Semi-empirical mass formula and applications. Mass parabolas; Ground state of a deuteron, magnetic moment and non-central forces; Meson theory of nuclear forces; Salient features of nuclear forces; Shell model of the nucleus - success and limitations; Violation of parity in beta decay; Gamma decay and internal conversion; Elementary ideas about Mossbauer spectroscopy; Q-value of nuclear reactions; Nuclear fission and fusion, energy production in stars. Nuclear reactors.

Classification of elementary particles and their interactions; Conservation laws; Quark structure of hadrons : Field quanta of electroweak and strong interactions; Elementary ideas about unification of forces; Physics of neutrinos.

4. **Solid State Physics, Devices and Electronics :**

Crystalline and amorphous structure of matter; Different crystal systems, space groups; Methods of determination of crystal structure; X-ray diffraction, scanning and transmission electron microscopies; Band theory of solids-conductors, insulators and semi-conductors; Thermal properties of solids, specific heat, Debye theory; Magnetism:

dia, para and ferromagnetism; Elements of super-conductivity, Meissner effect, Josephson junctions and applications; Elementary ideas about high temperature super-conductivity.

Intrinsic and extrinsic semi-conductors- p-n-p and n-p-n transistors ; Amplifiers and oscillators. Op-amps; FET, JFET and MOSFET; Digital electronics-Boolean identities, De Morgan's laws, Logic gates and truth tables. Simple logic circuits; Thermistors, solar cells; Fundamentals of microprocessors and digital computers.

POLITICAL SCIENCE AND INTERNATIONAL RELATIONS

PAPER-I

Political Theory and Indian Politics :

1. Political Theory: meaning and approaches.
2. Theories of state : Liberal, Neo-liberal, Marxist, Pluiralist, post-colonial and Feminist.
3. Justice : Conceptions of justice with special reference to Rawl's theory of justice and its communitarian critiques.
4. Equality : Social, political and economic; relationship between equality and freedom; Affirmative action.
5. Rights : Meaning and theories; different kinds of rights; Concept of Human Rights.
6. Democracy : Classical and contemporary theories; different models of democracy-representative, participatory and deliberative.
7. Concept of power : hegemony, ideology and legitimacy.
8. Political Ideologies : Liberalism, Socialism, Marxism, Fascism, Gandhism and Feminism.
9. Indian Political Thought: Dharamshastra, Arthashastra and Buddhist Traditions; Sir Syed Ahmed Khan, Sri Aurobindo, M. K. Gandhi, B. R. Ambedkar, M. N. Roy.

10. Western Political Thought : Plato, Aristotle, Machiavelli, Hobbes, Locke, John S. Mill, Marx, Gramsci, Hannah Arendt.

Indian Government and Politics :

1. **Indian Nationalism :**

   (a) Political Strategies of India's Freedom Struggle : Constitutionalism to mass Satyagraha, Non-cooperation, Civil Disobedience; Militant and Revolutionary Movements, Peasant and Workers Movements.

   (b) Perspectives on Indian National Movement; Liberal, Socialist and Marxist; Radical Humanist and Dalit.

2. **Making of the Indian Constitution :**

   Legacies of the British rule; different social and political perspectives.

3. **Salient Features of the Indian Constitution :**

   The Preamble, Fundamental Rights and Duties, Directive Principles; Parliamentary System and Amendment Procedures; Judicial Review and Basic Structure doctrine :

   (a) Principal Organs of the Union Government : Envisaged role and actual working of the Executive, Legislature and Supreme Court.

   (b)Principal Organs of the State Government : Envisaged role and actual working of the Executive, Legislature and High Courts.

4. **Grassroots Democracy :**

   Panchayati Raj and Municipal Government; Significance of 73rd and 74th Amendments; Grassroot movements.

5. **Statutory Institutions/Commissions :**

   Election Commission, Comptroller and Auditor General, Finance Commission, Union Public Service Commission, National Commission for Scheduled Castes, National Commission for Scheduled Tribes,

National Commission for Women; National Human Rights Commission, National Commission for Minorities, National Backward Classes Commission.

6. **Federalism :**

Constitutional provisions; changing nature of centre-state relations; integrationist tendencies and regional aspirations; inter-state disputes.

7. **Planning and Economic development :**

Nehruvian and Gandhian perspectives; Role of planning and public sector; Green Revolution, land reforms and agrarian relations; liberalization and economic reforms.

8. **Caste, Religion and Ethnicity in Indian Politics :**

9. **Party System :**

National and regional political parties, ideological and social bases of parties; Patterns of coalition politics; Pressure groups, trends in electoral behaviour; changing socio-economic profile of Legislators.

10. **Social Movement :**

Civil liberties and human rights movements; women's movements; environmentalist movements.

PAPER-II

Comparative Politics and International Relations—

Comparative Political Analysis and International Politics :

1. **Comparative Politics :**

Nature and major approaches; Political economy and political sociology perspectives; Limitations of the comparative method.

2. **State in Comparative Perspective :**

Characteristics and changing nature of the State in capitalist and socialist economies and advanced industrial and developing societies.

3. **Politics of Representation and Participation :**

   Political parties, pressure groups and social movements in advanced industrial and developing societies.

4. **Globalisation :**

   Responses from developed and developing societies.

5. **Approaches to the Study of International Relations :**

   Idealist, Realist, Marxist, Functionalist and Systems theory.

6. **Key Concepts in International Relations :**

   National interest, security and power; Balance of power and deterrence; Transational actors and collective security; World capitalist economy and globalisation.

7. **Changing International Political Order :**

   (a) Rise of super powers; Strategic and ideological Bipolarity, arms race and cold war ; Nuclear threat ;

   (b) Non-aligned Movement : Aims and achievements.

   (c) Collapse of the Soviet Union; Unipolarity and American hegemony; Relevance of non-alignment in the contemporary world.

8. **Evolution of the International Economic System :**

   From Brettonwoods to WTO; Socialist economies and the CMEA (Council for Mutual Economic Assistance); Third World demand for new international economic order; Globalisation of the world economy.

9. **United Nations :**

   Envisaged role and actual record; Specialized UN agencies-aims and functioning; need for UN reforms.

10. **Regionalisation of World Politics :**

    EU, ASEAN, APEC, AARC, NAFTA.

11. **Contemporary Global Concerns :**

    Democracy, human rights, environment, gender justice terrorism, nuclear proliferation.

India and the World—

1. **Indian Foreign Policy :**

   Determinants of foreign policy; the institutions of policy-making; Continuity and change.

2. Indiaôs Contribution to the Non-Alignment Movement Different phases; Current role.

3. **India and South Asia :**

   (a) Regional Co-operation : SAARC-past performance and future prospects.

   (b) South Asia as a Free Trade Area.

   (c) Indiaôs ñLook Eastò policy.

   (d) Impediments to regional co-operation : River water disputes; illegal cross border migration; Ethnic conflicts and insurgencies; Border disputes.

4. **India and the Global South : Relations with Africa and Latin America :**

   Leadership role in the demand for NIEO and WTO negotiations.

5. **India and the Global Centres of Power :**

   USA, EU, Japan, China and Russia.

6. **India and the UN System: Role in UN Peace-keeping :**

   Demand for Permanent Seat in the Security Council.

7. **India and the Nuclear Question :**

   Changing perceptions and policy.

8. **Recent developments in Indian Foreign Policy :**

   Indiaôs position on the recent crises in Afghanistan, Iraq and West Asia, growing relations with US and Isreal; Vision of a new world order.

PSYCHOLOGY

PAPER-I

Foundations of Psychology——

1. **Introduction :**

   Definition of Psychology; Historical antecedents of Psychology and trends in the 21st centrury; Psychology and scientific methods; Psychology in relation to other social sciences and natural sciences; Application of Psychology to societal problems.

2. **Methods of Psychology :**

   Types of research : Descriptive, evaluative, diagnostic and prognostic; Methods of Research : Survey, observation, case-study and experiments; Characteristics of experimental design and non-experimental designs; quasi-experimental designs; Focussed group discussions, brain storming, grounded theory approach.

3. **Research methods :**

   Major steps in psychological research (problem statement, hypothesis formulation, research design, sampling, tools of data collection, analysis and interpretation and report writing) ; Fundamental versus applied

research ; Methods of data collection (interview, observation, questionnaire and case study). Research Designs (Ex-post facto and experimental). Application of statistical techniques (t-test, two-way ANOVA, correlation and regression and factor analysis) item response theory.

4. **Development of Human Behaviour :**

Growth and development; Principles of development, Role of genetic and environmental factors in determining human behaviour; Influence of cultural factors in socialization; Life span development-Characteristics, development tasks, promoting psychological well-being across major stages of the life span.

5. **Sensation, Attention and Perception :**

Sensation: concepts of threshold, absolute and difference thresholds, signal-detection and vigilance; Factors influencing attention including set and characteristics of stimulus; Definition and concept of perception, biological factors in perception; Perceptual organization-influence of past experiences, perceptual defence-factor influencing space and depth perception, size estimation and perceptual readiness; The plasticity of perception; Extrasensory perception; Culture and perception, Subliminal perception.

6. **Learning :**

Concepts and theories of learning (Behaviourists, Gestaltalist and Information processing models). The processes of extinction, discrimination and generalisation. Programmed learning, probability learning, self instructional learning, concepts, types and the schedules of reinforcement, escape, avoidance and punishment, modelling and social learning.

7. **Memory :**

Encoding and remembering; Shot-term memory, Long-term memory, Sensory memory, Iconic memory, Echoic memory: The Multistore

model, levels of processing; Organization and Mnemonic techniques to improve memory; Theories of forgetting: decay, interference and retrieval failure: Metamemory; Amnesia: Anterograde and retrograde.

8. **Thinking and Problem Solving :**

Piaget's theory of cognitive development; Concept formation processes; Information processing, Reasoning and problem solving, Facilitating and hindering factors in problem solving, Methods of problem solving: Creative thinking and fostering creativity; Factors influencing decision making and judgement; Recent trends.

9. **Motivation and Emotion :**

Psychological and physiological basis of motivation and emotion; Measurement of motivation and emotion; Effects of motivation and emotion on behaviour; Extrinsic and intrinsic motivation; Factors influencing intrinsic motivation; Emotional competence and the related issues.

10. **Intelligence and Aptitude :**

Concept of intelligence and aptitude, Nature and theories of intelligence-Spearman, Thurstone, Gulford Vernon, Sternberg and J.P. Das; Emotional Intelligence, Social intelligence, measurement of intelligence and aptitudes, concept of I Q deviation I Q, constancy of I Q; Measurement of multiple intelligence; Fluid intelligence and crystallized intelligence.

11. **Personality :**

Definition and concept of personality; Theories of personality (psychoanalytical, socio-cultural, interpersonal, developmental, humanistic, behaviouristic, trait and type approaches); Measurement of personality (projective tests, pencil-paper test); The Indian approach to personality; Training for personality development; Latest approaches like big 5 factor theory; The notion of self in different traditions.

12. **Attitudes, Values and Interests :**

Definitions of attitudes, values and interests; Components of attitudes; Formation and maintenance of attitudes. Measurement of attitudes, values and interests. Theories of attitude changes, strategies for fostering values. Formation of stereotypes and prejudices; Changing other's behaviour, Theories of attribution; Recent trends.

13. **Language and Communication :**

Human language- Properties, structure and linguistic hierarchy, Language acquisition-predispotion, critical period hypothesis; Theories of Language development-Skinner and Chomsky; Process and types of communication-effective communication training.

14. **Issues and Perspectives in Modern Contemporary Psychology :**

Computer application in the psychological laboratory and psychological testing; Artificial intelligence; Psychocybernetics; Study of consciousnessleep-wak schedules; dreams, stimulus deprivation, meditation, hypnotic drug induced states; Extrasensory perception; Intersensory perception; Simulation studies.

PAPER-II

Psychology : Issues and applications—

1. **Psychological Measurement of Individual Differences :**

The nature of individual differences. Characteristics and construction of standardized psychological tests. Types of psychological tests. Use, misuse and limitation of psychological tests. Ethical issues in the use of psychological tests.

2. **Psychological well being and Mental Disorders :**

Concept of health-ill health positive health, well being casual factores in Mental disorders (Anxiety disorders, mood disorders; schizophrenia

and delusional disorders; personality disorders, substance abuse disorders). Factors influencing positive health, well being; lifestyle and quality of life; Happiness disposition

3. **Therapeutic Approaches :**

Psychodynamic therapies. Behaviour therapies. Client centered therapy. Cognitive therapies. Indigenous therapies (Yoga, Meditation). Biofeedback therapy. Prevention and rehabilitation of the mentally ill; Fostering mental health.

4. **Work Psychology and Organisational Behaviour :**

Personnel selection and training. Use of Psychological tests in the industry. Training and human resource development. Theories of work motivation. Herzberg, Maslow, Adam Equity theory, Porter and Lawler, Vroom; Leadership and participatory management; Advertising and marketing; Stress and its management; Ergonomics; consumer psychology; Managerial effectiveness; Transformational leadersip; Senitivity training; Power and politics in organizations.

5. **Application of Psychology to Educational Field :**

Psychological principles underlying effective teaching-learning process. Learning styles. Gifted, retarded, learning disabled and their training. Training for improving memory and better academic achievement. Personality development and value education. Educational, vocational guidance and Career counselling. Use of Psychological tests in educational institutions; Effective strategies in guidance programmes.

6. **Community Psychology :**

Definition and concept of Community Psychology. Use of small groups in social action. Arousing Community consciousness and action for handling social problems. Group decision making and leadership for social change. Effective strategies for social change.

7. **Rehabilitation Psychology :**

Primary, secondary and tertiary prevention programmes-role of psychologists. Organising of services for rehabilitation of physically, mentally and socially challenged persons including old persons. Rehabilitation of persons suffering from substance abuse, juvenile delinquency, criminal behaviours. Rehabilitation of victims of violence. Rehabilitation of HIV/AIDS victims, the role of social agencies.

8. **Application of Psychology to disadvantaged groups :**

The concepts of disadvantaged, deprivation social, physical, cultural and economic consequences of disadvantaged and deprived groups. Educating and motivating the disadvantaged towards development; Relative and prolonged deprivation.

9. **Psychological problem of social integration :**

The concept of social integration. The problem of caste, class, religion and language conflicts and prejudice. Nature and manifestation of prejudice between the ingroup and outgroup. Casual factors of such conflicts and prejudices. Psychological strategies for handling the conflicts and prejudices. Measures to achieve social integration.

10. **Application of Psychology in Information Technology and Mass Media :**

The present scenario of information technology and the mass media boom and the role of psychologists. Selection and training of Psychology professionals to work in the field of IT and mass media. Distance learning through IT and mass media. Entrepreneurship through e-commerce. Multilevel marketing. Impact of TV and fostering value through IT and mass media. Psychological consequences of recent developments in Information Technology.

11. **Psychology and Economic development :**

Achievement motivation and economic development. Characteristics of entrepreneurial behaviour. Motivating and Training people for entrepreneurship and economic development; Consumer rights and

consumer awareness, Government policies for promotion of entrepreneurship among youth including women entreprenures.

12. **Application of Psychology to environment and related fields :**

Environmental Psychology effects of noise, pollution and crowding. Population Psychology : Psychological consequence of population explosion and high population density. Motivating for small family norms. Impact of rapid scientific and technological growth on degradation of environment

13. **Application of psychology in other fields :**

(a) Military Psychology

Devising psycological tests for defence personnel for use in selection, Training, counseling; training psychologists to work , with defence personnel in promoting positive health; Human engineering in defence.

(b) Sports Psychology

Psychological interventions in improving performance of athletes and sports. Persons participating in Individual and Team Games.

(c) Media influences on pro and anti-social behaviour.

(d) Psychology of Terrorism.

14. **Psychology of Gender :**

Issues of discrimination, Management of diversity; Glass ceiling effect, Self-fulfilling prophesy, Women and Indian society.

PUBLIC ADMINISTRATION

PAPER-I

Administration Theory—

1. **Introduction :**

Meaning, scope and significance of Public Administration, Wilsonôs vision of Public Administration, Evolution of the discipline and its

present status. New Public Administration, Public Choice approach; Challenges of liberalization, Privatisation, Globalisation; Good Governance: concept and application; New Public Management.

2. **Administrative Thought :**

Scientific Management and Scientific Management movement; Classical Theory; Weberôs bureaucratic model its critique and post-Weberian Developments; Dynamic Administration (Mary Parker Follett); Human Relations School (Elton Mayo and others); Functions of the Executive (C.I. Barnard); Simonôs decision-making theory; Participative Man-agement (R. Likert, C. Argyris, D. Mc Gregor.)

3. **Administrative Behaviour :**

Process and techniques of decision-making; Communication; Morale; Motivation Theories content, process and contemporary; Theories of Leadership: Traditional and Mo-dem:

4. **Organisations :**

Theories systems, contingency; Structure and forms: Ministries and Departments, Corporations, Companies; Boards and Commissions; Ad hoc and advisory bodies; Headquarters and Field relationships; Regulatory Authorities; Public-Private Partnerships.

5. **Accountability and Control :**

Concepts of accountability and control; Legislative, Executive and judicial control over administration; Citizen and Administration; Role of media, interest groups, voluntary organizations; Civil society; Citizen's Charters; Right to Information; Social audit.

6. **Administrative Law :**

Meaning, scope and significance ; Dicey on Administrative law; Delegated legislation; Administrative Tribunals.

7. **Comparative Public Administration :**

Historical and sociological factors affecting administrative systems; Administration and politics in different countries; Current status of Comparative Public Administration; Ecology and administration; Riggsian models and their critique.

8. **Development Dynamics :**

Concept of development; Changing profile of development administration; 'Anti-development thesis'; Bureaucracy and development; Strong state versus the market debate; Impact of liberalisation on administration in developing countries; Women and development the self-help group movement.

9. **Personnel Administration :**

Importance of human resource development; Recruitment, training, career advancement, position classification, discipline, performance appraisal, promotion, pray and service conditions; employer-employee relations, grievance redressal mechanism; Code of conduct; Administrative ethics.

10. **Public Policy :**

Models of policy-making and their critique; Processes of conceptualisation, planning, implementation, monitoring, evaluation and review and their limitations; State theories and public policy formulation.

11. **Techniques of Adminstrative Improvement :**

Organisation and methods, Work study and work management; e-governance and information technology; Man-agement aid tools like network analysis, MIS, PERT, CPM.

12. **Financial Administration :**

Monetary and fiscal policies: Public borrowings and public debt Budgets types and forms; Budgetary process; Financial accountability; Accounts and audit.

PAPER-II

Indian Administration—

1. **Evolution of Indian Administration :**

   Kautilya Arthashastra; Mughal administration; Legacy of British rule in politics and administration, Indianization of Public services, revenue administration, district Administration, local self Government. .

2. **Philosophical and Constitutional framework of Government :**

   Salient features and value premises; Constitutionalism;

   Political culture; Bureaucracy and democracy; Bureaucracy and development.

3. **Public Sector Undertakings :**

   Public sector in modern India; Forms of Public Sector Undertakings; Problems of autonomy, accountability and control; Impact of liberalization and privatization.

4. **Union Government and Administration :**

   Executive, Parliament, Judiciary-structure, functions, work processes; Recent trends; Intra-governmental relations; Cabinet Secretariat; Prime Minister's Office; Central Secretariat; Ministries and Departments; Boards; Commissions; Attached offices; Field organizations.

5. **Plans and Priorities :**

   Machinery of planning; Role, composition and functions of the Planning Commission and the National Development Council; 'Indicative' planning; Process of plan formulation at Union and State levels; Constitutional Amendments (1992) and decentralized planning for economic development and social justice.

6. **State Government and Administration :**

Union-State administrative, legislative and financial relations; Role of the Finance Commission; Governor; Chief Minister; Council of Ministers; Chief Secretary; State Secretariat; Directorates.

7. **District Administration since Independence :**

Changing role of the Collector; Union-State-local relations; Imperatives of development management and law and order administration; District administration and democratic decentralization.

8. **Civil Services :**

Constitutional position; Structure, recruitment, training and capacity building; Good governance initiatives; Code of conduct and discipline; Staff associations; Political rights; Grievance redressal mechanism; Civil service neutrality; Civil service activism.

9. **Financial Management :**

Budget as a political instrument; Parliamentary control of public expenditure; Role of finance ministry in monetary and fiscal area; Accounting techniques; Audit; Role of Controller General of Accounts and Comptroller and Auditor General of India.

10. **Administrative Reforms since Independence :**

Major concerns; Important Committees and Commissions; Reforms in financial management and human resource development; Problems of implementation.

11. **Rural Development :**

Institutions and agencies since Independence; Rural development programmes: foci and strategies; Decentralization and Panchayati Raj; 73rd Constitutional amendment.

12. **Urban Local Government :**

Municipal governance: main features, structures, finance and problem areas; 74th Constitutional Amendment; Global-local debate; New localism; Development dynamics, politics and administration with special reference to city management.

13. **Law and Order Administration :**

British legacy; National Police Commission; Investigative agencies; Role of Central and State Agencies including paramilitary forces in maintenance of law and order and countering insurgency and terrorism; Criminalisation of politics and administration; Police-public relations; Reforms in Police.

14. **Significant issues in Indian Administration :**

Values in public service; Regulatory Commissions; National Human Rights Commission; Problems of administration in coalition regimes; Citizen administration interface; Corruption and administration; Disaster management.

SOCIOLOGY

PAPER-I

FUNDAMENTALS OF SOCIOLOGY

1. **Sociology - The Discipline :**

(a) Modernity and social changes in Europe and emergence of Sociology.

(b) Scope of the subject and comparison with other social sciences.

(c) Sociology and common sense.

2. **Sociology as Science :**

(a) Science, scientific method and critique.

(b) Major theoretical strands of research methodology.

(c) Positivism and its critique.

(d) Fact value and objectivity.

(e) Non-positivist methodologies.

3. **Research Methods and Analysis :**

(a) Qualitative and quantitative methods.

(b) Techniques of data collection.

(c) Variables, sampling, hypothesis, reliability and validity.

4. **Sociological Thinkers :**

(a) Karl Marx - Historical materialism, mode of production, alienation, class struggle.

(b) Emile Durkhteim - Division of labour, social fact, suicide, religion and society.

(c) Max Weber - Social action, ideal types, authority, bureaucracy, protestant ethic and the spirit of capitalism.

(d) Talcolt Parsons - Social system, pattern variables.

(e) Robert K. Merton - Latent and manifest functions, conformity and deviance, reference groups.

(f) Mead - Self and identity.

5. **Stratification and Mobility :**

(a) Concepts - equality, inequality, hierarchy, exclusion, poverty and deprivation.

(b) Theories of social stratification-Structural functionalist theory, Marxist theory, Weberian theory.

(c) Dimensions - Social stratification of class, status groups, gender, ethnicity and race.

(d) Social mobility - open and closed systems, types of mobility, sources and causes of mobility.

6. **Works and Economic Life :**

(a) Social organization of work in different types of society - slave society, feudal society, industrial capitalist society.

(b) Formal and informal organization of work.

(c) Labour and society.

7. **Politics and Society :**

(a) Sociological theories of power.

(b) Power elite, bureaucracy, pressure groups and political parties.

(c) Nation, state, citizenship, democracy, civil society, ideology.

(d) Protest, agitation, social movements, collective action, revolution.

8. **Religion and Society :**

(a) Sociological theories of religion.

(b) Types of religious practices: animism, monism, pluralism, sects, cults.

(c) Religion in modern society: religion and science, secularization, religious revivalism, fundamentalism.

9. **Systems of Kinship :**

(a) Family, household, marriage.

(b) Types and forms of family.

(c) Lineage and descent.

(d) Patriarchy and sexual division of labour.

(e) Contemporary trends.

10. **Social Change in Modern Society :**

(a) Sociological theories of social change.

(b) Development and dependency.

(c) Agents of social change.

(d) Education and social change.

(e) Science, technology and social change.

PAPER-II

INDIAN SOCIETY : STRUCTURE AND CHANGE

A. **Introducing Indian Society :**

(i) Perspectives on the Study of Indian Society :

(a) Indology (G.S. Ghure).

(b) Structural functionalism (M. N. Srinivas).

(c) Marxist sociology (A. R. Desai).

(ii) Impact of colonial rule on Indian society :

(a) Social background of Indian nationalism.

(b) Modernization of Indian tradition.

(c) Protests and movements during the colonial period.

(d) Social reforms.

B. **Social Structure :**

(i) **Rural and Agrarian Social Structure :**

(a) The idea of Indian village and village studies.

(b) Agrarian social structure- evolution of land tenure system, land reforms.

(ii) **Caste System :**

(a) Perspectives on the study of caste systems: G. S. Ghurye, M. N. Srinivas, Louis Dumont, Andre Beteille.

(b) Features of caste system.

(c) Untouchability-forms and perspectives

(iii) **Tribal Communities in India :**

(a) Definitional problems.

(b) Geographical spread.

(c) Colonial policies and tribes.

(d) Issues of integration and autonomy.

(iv) **Social Classes in India :**

(a) Agrarian class structure.

(b) Industrial class structure.

(c) Middle classes in India.

(v) **Systems of Kinship in India :**

(a) Lineage and descent in India.

(b) Types of kinship systems.

(c) Family and marriage in India.

(d) Household dimensions of the family.

(e) Patriarchy, entitlements and sexual division of labour.

(vi) **Religion and Society :**

(a) Religious communities in India.

(b) Problems of religious minorities.

C. **Social Changes in India :**

(i) **Visions of Social Change in India :**

(a) Idea of development planning and mixed economy.

(b) Constitution, law and social change.

(c) Education and social change.

(ii) **Rural and Agrarian Transformation in India :**

(a) Programmes of Rural Development, Community Development Programme, cooperatives, poverty alleviation schemes.

(b) Green revolution and social change.

(c) Changing modes of production in Indian agriculture.

(d) Problems of rural labour, bondage, migration.

(iii) **Industrialization and Urbanisation in India :**

(a) Evolution of modern industry in India.

(b) Growth of urban settlements in India.

(c) Working class : structure, growth, class mobilization.

(d) Informal sector, child labour.

(e) Slums and deprivation in urban areas.

(iv) **Politics and Society :**

(a) Nation, democracy and citizenship.

(b) Political parties, pressure groups, social and political elite.

(c) Regionalism and decentralization of power.

(d) Secularization.

(v) **Social Movements in Modern India :**

(a) Peasants and farmers movements.

(b) Women's movement.

(c) Backward classes & Dalit movements.

(d) Environmental movements.

(e) Ethnicity and Identity movements.

(vi) **Population Dynamics :**

(a) Population size, growth, composition and distribution.

(b) Components of population growth : birth, death, migration.

(c) Population Policy and family planning.

(d) Emerging issues : ageing, sex ratios, child and infant mortality, reproductive health.

(vii) **Challenges of Social Transformation :**

(a) Crisis of development : displacement, environmental problems and sustainability.

(b) Poverty, deprivation and inequalities.

(c) Violence against women.

(d) Caste conflicts.

(e) Ethnic conflicts, communalism, religious revivalism.

(f) Illiteracy and disparities in education.

STATISTICS

PAPER-I

1. **Probability :**

Sample space and events, probability measure and probability space, random variable as a measurable function, distribution function of a random variable, discrete and continuous-type random variable, probability mass function, probability density function, vector-valued random variable, marginal and conditional distributions, stochastic independence of events and of random variables, expectation and moments of a random variable, conditional expectation, convergence of a sequence of random variable in distribution, in probability, in path mean and almost everywhere, their criteria and inter-relations, Chebyshev's inequality and Khintchine's weak law of large numbers, strong law of large numbers and Kolmogoroffs theorems, probability generating function, moment generating function, characteristic function, inversion theorem, Linderberg and Levy forms of central limit theo-rem, standard discrete and continuous probability distributions.

2. **Statistical Inference :**

Consistency, unbiasedness, efficiency, sufficiency, completeness, ancillary statistics, factorization theorem, exponen-tial family of distribution and its properties, uniformly minimum variance unbiased (UMVU) estimation, Rao Blackwell and Lehmann-Scheffe theorems, Cramer-Rao inequality for single Parameter. Estimation by methods of moments, maximum likelihood, least squares, minimum chisquare and modified minimum chisquare, properties of maximum

likelihood and other estimators, asymptotic efficiency, prior and posterior distributions, loss function, risk function, and minimax estimator. Bayes estimators.

Non-randomised and randomised tests, critical function, MP tests, Neyman-Pearson lemma, UMP tests, monotone like-lihood ratio: similar and unbiased tests, UMPU tests for single paramet likelihood ratio test and its asymptotic distribution. Confidence bounds and its relation with tests.

Kolmogorovôs test for goodness of fit and its consistency, sign test and its optimality. Wilcoxon signedranks test and its consistency, Kolmogorov-Smirnov two sampletest, run test, Wilcoxon-Mann-Whitney test and median test, their consistency and asymptotic normality.

Waldôs SPRT and its properties, Oc and ASN functions for tests regarding parameters for Bernoulli, Poisson, normal and exponential distributions. Wald's fundamental identity.

3. **Linear Inference and Multivariate Analysis :**

Linear statistical models, theory of least squares and analysis of variance, Gauss-Markoff theory, normal equations, least squares estimates and their precision, test of significance and interval estimates based on least squares theory in oneway, two-way and three-way classified data, regression analysis, linear regression, curvilinear regression and orthogo-nal polynomials, multiple regression, multiple and partial correlations, estimation of variance and covariance components, multivariate normal distribution, Mahalanobis's D2 and Hotelling's T2 statistics and their applications and properties, discriminant analysis, canonical correlations, principal component analysis.

4. **Sampling Theory and Design of Experiments :**

An outline of fixed-population and super-population approaches, distinctive features of finite population sampling, propability sampling

designs, simple random sampling with and without replacement, stratified random sampling, sys-tematic sampling and its efficacy, cluster sampling, twostage and multi-stage sampling, ratio and regression methods of estimation involving one or more auxiliary variables, two-phase sampling, probability proportional to size sampling with and without replacement, the Hansen-Hurwitz and the Horvitz-Thompson estimators, non-negative variance estimation with reference to the Horvitz-Thompson estimator, non-sampling errors.

Fixed effects model (two-way classification) random and mixed effects models (two-way classification with equal observation per cell), CRD, RBD, LSD and their analyses, incom-plete block designs, concepts of orthogonality and balance, BIBD, missing plot technique, factorial experiments and 24 and 32, confounding in factorial experiments, split-plot and simple lattice designs, transformation of data Duncan's multiple range test.

PAPER-II

1. **Industrial Statistics :**

Process and product control, general theory of control charts, different types of control charts for variables and attributes, X, R, s, p, np and charts, cumulative sum chart. Single, double, multiple and sequential sampling plans for attributes, OC, ASN, AOQ and ATI curves, concepts of producer's and consumer's risks, AQL, LTPD and AOQL, Sampling plans for variables, Use of Dodge-Romin tables.

Concept of reliability, failure rate and reliability functions, reliability of series and parallel systems and other simple configurations, renewal density and renewal function, Failure models: exponential, Weibull, normal, lognormal. Problems in life testing, censored and truncated experiments for exponential models.

2. **Optimization Techniques :**

Different types of models in Operations Research, their construction and general methods of solution, simulation and Monte-Carlo methods

formulation of Linear Programming (LP) problem, simple LP model and its graphical solution, the simplex procedure, the two-phase method and the M-technique with artificial variables, the duality theory of LP and its economic interpretation, sensitivity analysis, transpotation and assignment problems, rectangular games, two-person zerosum games, methods of solution (graphical and algebric).

Replacement of failing or deteriorating items, group and individual replacement policies, concept of scientific inventory management and analytical structure of inventory problems, simple models with deterministic and stochastic demand with and without lead time, storage models with particular reference to dam type.

Homogeneous discrete-time Markov chains, transition probability matrix, classification of states and ergodic theorems, homogeneous continuous-time Markov chains, Pois-son process, elements of queuing theory, M/MI, M/M/K, G/ M/l and M/G/1 queues.

Solution of statistical problems on computers using well-known statistical software packages like SPSS.

3. **Quantitative Economics and Official Statistics :**

Determination of trend, seasonal and cyclical components, Box-Jenkins method, tests for stationary series, ARIMA models and determination of orders of autoregressive and moving average components, fore-casting.

Commonly used index numbers - Laspeyre's, Paasche's and Fisher's ideal index numbers, cham-base index number, uses and limitations of index numbers, index number of wholesale prices, consumer price, agricultural production and industrial production, test fot index numbers -proportionality, time-reversal, factor-reversal and circular.

General linear model, ordinary least square and generalized least squares methods of estimation, problem of multi-collinearity,

consequences and solutions of multi-collinearity, autocorrelation and its consequences, heteroscedasticity of disturbances and its testing, test for independence of disturbances concept of structure and model for simultaneous equations, problem of identification-rank and order conditions of identifiability, two-stage least square method of estimation.

Present official statistical system in India relating to population, agriculture, industrial production, trade and prices, methods of collection of official statistics, their reliability and limitations, principal publications containing such statistics, various official agencies responsible for data collection and their main functions.

4. **Demography and Psychometry :**

Demographic data from census, registration, NSS other surveys, their limitations and uses, definition, construction and uses of vital rates and ratios, measures of fertility, reproduction rates, morbidity rate, standardized death rate, complete and abridged life tables, construction of life tables from vital statistics and census returns, uses of life tables, logistic and other population growth curves, fitting a logistic curve, population projection, stable population, quasi-stable population, techniques in estimation of demographic parameters, standard classification by cause of death, health surveys and use of hospital statistics.

Methods of standardisation of scales and tests, Z-scores, standard scores, T-scores, percentile scores, intelligence quotient and its measurement and uses, validity and reliability of test scores and its determination, use of factor analysis and path analysis in psychometry.

ZOOLOGY

PAPER-I

1. **Non-chordata and Chordata :**

(a) Classification and relationship of various phyla up to subclasses: Acoelomate and Coelomate, Protostomes and Deuterostomes,

Bilateria and Radiata; Status of Protista, Parazoa, Onychophora and Hemichordata; Symmetry.

(b) Protozoa : Locomotion, nutrition, reproduction, sex; General features and life history of Paramaecium, Monocystis. Plasmodium and Leishmania.

(c) Porifera: Skeleton, canal system and reproduction.

(d) Cnidaria : Polymorphism, defensive structures and their mechanism; coral reefs and their formation; metagenesis; general features and life history of Obelia and Aurelia.

(e) Platyhelminthes: Parasitic adaptation; general features and life history of Fasciola and Taenia and their-Pathogenic symptoms.

(f) Nemathelminthes : General features, life history, parasitic adaptation of Ascaris and Wuchereria.

(g) Annelida : Coelom and metamerism; modes of life in polychaetes; general features and life history of Nereis, earthworm and leach.

(h) Arthropoda : Larval forms and parasitism in Crustacea; vision and respiration in arthropods (Prawn, cockroach and scorpion); modification of mouth, parts in insects (cockroach, mosquito, housefly, honey bee and butterfly), metapmor phosis in insect and its hormonal regulation, social behaviour of Apis and termites.

(i) Molluscs : Feeding, respiration, locomotion, general features and life history of Lamellidens, Pila and Sepia. Torsion and detorsion in gastropods.

(j) Echinodermata : Feeding, respiration, locomotion, larval forms, general features and life history of Asterias.

(k) Protochordata : Origin of chordates; general features and life history of Branchiostoma and Herdmania.

(l) Pisces: Respiration, locomotion and migration.

(m) Amphibia : Origin of tetrapods, parental care, paedomorphosis.

(n) Reptilia : Origin of reptiles, skull types, status of Sphenodon and crocodiles.

(o) Aves : Origin of birds, flight adaptation, migration.

(p) Mammalia : Origin of mammals, dentition, general features of egg laying mammals, pouchedmammals, aquatic mammals and primates, endocrine glands (pituitary, thyroid, parathyroid, adrenal, pancreas, gonads) and their interrelationships.

(q) Comparative functional anatomy of various systems of vertebrates. (integument and its derivatives, endoskeleton, locomotory organs, digestive system, respiratory system, circulatory system including heart and aortic arches, urinogenital system, brain and sense organs (eye and ear).

2. **Ecology :**

(a) Biosphere: concept of biosphere; biomes, Biogeochemical cycles, Human induced changes in atmosphere including green house effect, ecological succession, biomes and ecotones, community ecology.

(b) Concept of ecosystem; structure and function of ecosystem, types of ecosystem, ecological succession, ecological adaptation.

(c) Population; characteristics, population dynamics, population stabilization.

(d) Biodiversity and diversity conservation of natural resources.

(e) Wildlife of India.

(f) Remote sensing for sustainable development.

(g) Environmental biodegradation; pollution and its impact on biosphere and its prevention.

3. **Ethology :**

(a) Behaviour : Sensory filtering, responsiveness, sign stimuli, learning, and memory, instinct, habituation, conditioning, imprinting.

(b) Role of hormones in drive; role of pheromones in alarm spreading; crypsis, predator detection, predator tactics, social hierarchies in primates, social organization in insects;

(c) Orientation, navigation, homing; biological rhythms: biological clock, tidal, seasonal and circadian rhythms.

(d) Methods of studying animal behaviour including sexual conflict, selfishness, kinship and altruism.

4. **Economic Zoology :**

(a) Apiculture, sericulture, lac culture, carp culture, pearl culture, prawn culture, vermiculture.

(b) Major infectious and communicable diseases (malaria, filaria, tuberculosis, cholera and AIDS) their vectors, pathogens and prevention.

(c) Cattle and livestock diseases, their pathogen (helminths) and vectors (ticks, mites, Tabanus, Stomoxys).

(d) Pests of sugar cane (Pyrilla perpusiella), oil seed (Achaeajanata) and rice (Sitophilus oryzae).

(i) Transgenic animals.

(e) Medical biotechnology, human genetic disease and genetic counselling, gene therapy.

(f) Forensic biotechnology.

5. **Biostatistics :**

Designing of experiments; null hypothesis; correlation, regression, distribution and measure of central tendency, chi square, student-test, F-test (one-way & two-way F-test).

6. **Instrumentation methods :**

(a) Spectrophotometer, phase contrast and fluorescence microscopy, radioactive tracer, ultra centrifuge, gel . electrophoresis, PCR, ELISA, FISH and chromosome painting.

(b) Electron microscopy (TEM, SEM).

PAPER-II

1. **Cell Biology :**

(a) Structure and function of cell and its organelles (nucleus, plasma membrane, mitochondria, Golgi bodies, endoplasmic reticulum, ribosomes and lysosomes), cell division (mitosis and meiosis), mitotic spindle and mitotic apparatus, chromosome movement chromosome type ploytene and lambrush, organization of chromatin, heterochromatin, Cell cycle regulation.

(b) Nucleic acid topology, DNA motif, DNA replication, transcription, RNA processing, translation, protein foldings and transport.

2. **Genetics :**

(a) Modern concept of gene, split gene, genetic regulation, genetic, code.

(b) Sex chromosomes and their evolution, sex determination in Drosophila and man.

(c) Mendel's laws of inheritance, recombination, linkage, multiple alleles, genetics of blood groups, pedigree analysis, hereditary diseases in man.

(d) Mutations and mutagenesis.

(e) Recombinant DNA technology, plasmid, cosmid, artificial chromosomes as vectors, transgenics, DNA cloning and whole animal cloning (principles and methods).

(f) Gene regulation and expression in prokaryotes and eukaryotes.

(g) Signal molecules, cell death, defects in signaling pathway and consequences.

(h) RFLP, RAPD and AFLF and application of RFLP in DNA finger-printing, ribozyme technologies, human genome project, genomics and protomics.

3. **Evolution :**

(a) Theories of origin of life.

(b) Theories of evolution ; Natural selection, role of mutation in evolution, evolutionary patterns, molecular drive, mimicry, variation, isolation and speciation.

(c) Evolution of horse, elephant and man using fossil data.

(d) Hardy-Weinberg Law.

(e) Continental drift and distribution of animals.

4. **Systematics :**

Zoological nomenclature, international code, cladistics, molecular taxonomy and biodiversity.

5. **Biochemistry :**

(a) Structure and role of carbohydrates, fats, fatty acids, cholesterol, proteins and amino-acids, nucleic acids. Bioenergetics.

(b) Glycolysis and Krebs cycle, oxidation and reduction, oxidative phosphorylation; energy conservation and release, ATP, cycl cyclic AMP-its structure and role.

(c) Hormone classification (steroid and peptide hormones), biosynthesis and functions.

(d) Enzymes: types and mechanisms of action.

(e) Vitamins and co-enzymes.

(f) Immunoglobulin and immunity.

6. **Physiology (with special reference to mammals) :**

(a) Composition and constituents of blood; blood groups and Rh factor in man ; factors and mechanism of coagulation; iron metabolism, acid-base balance, thermo regulation, anticoagulants.

(b) Haemoglobin: Composition, types and role in transport of oxygen and carbon dioxide.

(c) Digestion and absorption : Role of salivary glands, liver, pancreas and intestinal glands.

(d) Excretion : nephron and regulation of urine formation; osmo-regulation and excretory product.

(e) Muscles: Types, mechanism of contraction of skel-etal muscles, effects of exercise on muscles.

(f) Neuron: nerve impulse-its conduction and synaptic transmission ; neurotransmitters.

(g) Vision, hearing and olfaction in man.

(h) Physiology of reproduction puberty and menopause in human.

7. **Developmental Biology :**

(a) Gametogenesis ; spermatogenesis, composition of semen, in vitro and in vivo capacitation of mammalian sperm, Oogenesis, totipotency; fertilization, morphogenesis and morphogen; blastogeneis, establishment of body axes formation, fate map,

gestulation in frog and chick; genes in development in chick homeotic genes, development of eye and heart, placenta in mammals.

(b) Cell lineage, cell to cell interaction, Genetic and induced teratogenesis, role of thyroxine in control of metamorphosisin amphibia, paedogenesis and neo-teny, cell death, aging.

(c) Developmental genes in man, in vitro fertilization ; and embryo transfer ; cloning.

(d) Stem cells: Sources, types and their use in human welfare.

(e) Biogenetic law.

(f)

LANGUAGES :

ARABIC

PAPER-I

1. (a) Origin and Development of the language in outline.

   (b) Significant features of the grammar of the language, Rhetoricôs, Prosody.

2. Literary History and Literary criticism-Literary movements, classical background ; Socio-Cultural influences, and modern trends, Origin and development of modern literary geners including drama, novel, short story, essay.

3. Short Essay-in Arabic.

PAPER-II

This paper will require first-hand reading of the texts prescribed and will be designed to test the candidate's critical ability.

POETS

1. Imraul Qais : His Maullaqah : ñQifaa Nabki mim Zikraa Hawibin Wa Manzilò (Complete).

2. Zohair Bin Abi Sulma : His maullaqah :ð ñA min Aufaa dimnatun lam takaleamiò (Complete).

3. Hassan Bin Thabit : The following live Qasaid from his Diwan : From Qasidah No.1 to Qasidah IV and the Qasidah: ñLillahi, Darru isaabatin Nadamtuhum + Yauman bijlilaqa.ò

4. Umar Bin Abi Rabiah: 5 Ghazals from his Diwan :

   (i) Falanma to waqafna was sallantu oshwaqat + Wujudhum Zahahal

   Husnu and tataquanna, (Complete)

   (ii) Lalta Hindan anjazanta ma taidu + Washaft anfusona mimma tajidu (Complete)

   (iii) Katabtuilaiki min baladi + Kitaba muwallahin Kamadi (Complete).

   (iv) Amin aali Numin anta qhaadin famubkiru ghadata ghadia amraaihum famuhajjaru (Complete).

   (v) Qaalaii Feeha Attequn Maqaalan + FajaratMimma Yaqooluddumoou. (Complete)

5. Farazdaq : The following 4 Qasaid from his Diwan :

   (i) ñHaazallazi taariful Bathaau watatahuò in praise of Zainul Abideen Ali Bin Hussain.

   (ii) ñZarrat Sakeenatu atlaahan anakha bihim in praise of Umar Bin A. Aziz.

   (iii) ñWa Koomin tanamul adhyal ainanò in praise of Saeed Bin al- aas. (Complete).

   (iv) ñWa atlasa assaalinwa maakano sahibanò in praise of ñthe Wolfsò

6. Bashhar Bin Murd. The following two Qasaid from his Diwan :

   (i) ñIzaa balaghar raaiul mashwarata fastain + Biraai naseehinaw naseehate haazimi (Complete)

   Khaliaiya min Kaabin aeenaa akhookumma - Allaa darahi innal Kareem muinu. (Complete).

7. Abu Nawas. First three Qasaid from his Diwan.

8. Shaqui : The following five Qasaid from his Diwan ñAl- Shauqiyalò.

   (i) ñGhaaba Boloumò (Complete).

   (ii) ñKaneesaturn saarat ilia masjidiò (Complete).

   (iii) ñAshloo hawaki liman yaloomu fayaozaruò (Complete).

   (iv) ñSalaamummin sabaa Baradaa araqquò (Nakbatu Dimashk). (Complete).

   ñSalaamun Neel yaa Gandhi - Wa hazaz Zahru min indiò (Complete)

Authors :

1 Ibnul Muqalf: ñKaliala Wa Dimnaò excluding Muqaddamah :ð Chapter 1 : Complete ñAI Asad wa-al thausò.

2. Al-Jahiz: AI-Bayan Wat Tab'in : VII Edited by Abdul Salam Mohd. Haroon. Cairo, Egypt from pp. 31 to 85.

3. Ibn Khaldun : his Muqaddamah : 39 pages; part six from the first chapter :

   From ñAffaslul saadis minal kitaabil awalò to ñwa min Furooihi al Jabruwal muqablaò

4. Mohmud Timur: Story ñAmml Mutawalljiò from his book ñQaalar Raaviò.

5. Taufiq Al-Hakim : Drama : ñSinnul muntahiraaò from his book ñMasrahiyatu Tahtiqal Hakimò.

Note :ð Candidates will be required to answer some questions carrying not less than 25 percent marks in Arabic also.

DOGRI

PAPER-I

History of Dogri Language and Literature

(Answers must be written in Dogri)

Section-A

History of Dogri Language :

1. Dogri Language: Origin and development through different stages.
2. Linguistic boundaries of Dogri and its dialects.
3. Characteristic features of Dogri Language.
4. Structure of Dogri Language :
   (a) Sound Structure:

   Segmental: Vowels and Consonants

   Non-segmental : Length, Stress, Nasalization, Tone and Junture.

   (b) Morphology of Dogri :

   (i). Inflection Categories: Gender, Number, Case, Person, Tenser and Voice.

   (ii). Word Formation: use of prefixes, infixes and suffixes.

   (iii). Vocabulary: tatsam, tadbhav, foreign and regional.

   (c) Sentence Structure ; Major Sentence-types and their constituents, agreement and concord in Dogri syntax.

5. Dogri Language and Scripts : Dogre/Dogra Akkhar, Devanagari and Persia.

Section-B

History of Dogri Language :

1. A brief account of Pre-independence Dogri Literature : Poetry and Prose.
2. Development of modern Dogri Poetry and main trends in Dogri Poetry.
3. Development of Dogri short-story, main trends and prominent short-storywriters.
4. Development of Dogri Novel, main trends and contribution of Dogri Novelists.
5. Development of Dogri Drama and contribution of prominent playwrights.
6. Development of Dogri Prose: essays, Memoirs and travelogues.
7. An introduction to Dogri Folk Literature-Folk songs, folk tales 7 ballads.

PAPER--II

Textual Criticism of Dogri Literature.

(Answers must be written in Dogri)

Section-A

Poetry :

1. Azadi Paihle Di Dogri Kavita

   The following poets :

   Devi Ditta, Lakkhu, Ganga Ram, Ramdhan, Hardutt, Pahari Gandhi Babak Kanshi Ram and Permanand Almast.

2. Modern Dogri Poetry.

   Azadi Bad Di Dogri Kavitað

   The following poets :

   Kishan Smailpuri, Tara Smailpuri Mohan Lal Sapolia, Yash Sharma, K.S.Madhukar,, Padma Sachdev, Jitendra Udhampuri, Charan Singh and Prakash Premi

3. Sheeraza Dogri Number 102, Ghazal Ankð

   The following poets :

   Ram Lal Sharma, Ved Pal Deep, N.D. Jamwal, Shiv Ram Deep, Ashwini Magotra and Virendra Kesar

4. Sheeraza Dogri Number 147, Ghazal Ankð

   The following poets :

   R. N. Shastri, Jitendra Udhampuri, Champa Sharma and Darsha Darshi.

5. Ramayan (Epic) by Shambhu Nath Sharma (up to Ayodhya Kand)

6. Veer Gulab (Khand Kavya) by Dinoo Bhai Pant.

SECTION-B

Prose :

1. Ajakani Dogri Kahani
   The following Short Story Writers :

   Madan Mohan Sharma, Narendra Khajuria and B. P. Sathe.

2. Ajakani Dogri Kahani Part-II

   The following Short Story Writers :

   Ved Rahi, Narsingh Dev Jamwal, Om Goswami, Chahttrapal, Lalit Magotra, Chaman Arora and Ratan Kesar

3. Khatha Kunj Bhag-II

   The following Story Writers :

   Om Vidyarthi, Champa Sharma and Krishan Sharma.

4. Meel Patthar (collection of short stories) by Bandhu Sharma.

5. Kaiddi (Novel) by Desh Bandhu Dogra Nutan.

6. Nanga Rukkh (Novel) by O.P. Sharma Sarathi.

7. Nayaan (Drama) by Mohan Singh.

8. Satrang (A collection of one-act plays). The following play-wrights :

   Vishwa Nath Khajuria, Ram Nath Shastri, Jitendra Sharma, Lalit Magotra and Madan Mohan Sharma

9. Dogri Lalit Nibandh

   The following authors :

   Vishwa Nath Khajuria, Narayan Mishra, Balkrishan Shastri, Shiv Nath, Shyam Lal Sharma, Lakshmi Narayan, D.C. Prashant, Ved Ghai, Kunwar Viyogi.

ENGLISH

The syllabus consists of two papers, designed to test a first hand and critical reading of texts prescribed from the following periods in English Literature: Paper I: 1600-1900 and Paper II: 1900-1990.

(There will be two compulsory questions in each paper: (a) A short-notes question related to the topics for general study, and (b) A critical analysis of UNSEEN passages both in prose and verse.)

PAPER-I

(Answers must be written in English)

Texts for detailed study are listed below. Candidates will also be required to show adequate knowledge of the following topics and movements :

The Renaissance ; Elizabethan and Jacobean Drama ; Metaphysical Poetry ; The Epic and the Mockepic ; Neoclassicism ; Satire ; The Romantic Movement ; The Rise of the Novel ; The Victorian Age.

Section-A

1. William Shakespeare : King Lear and The Tempest.
2. John Donne. The following poems :

   -Canonization ;

   -Death be not proud ;

   -The Good Morrow ;

   -On his Mistress going to bed ;

   -The Relic ;
3. John Milton: Paradise Lost, I, II, IV, IX.
4. Alexander Pope. The Rape of the Lock.
5. William Wordsworth. The following poems :

   -Ode on Intimations of Immortality.

   -Tintern Abbey.

   -Three years she grew.

   -She dwelt among untrodden ways.

   -Michael.

   -Resolution and Independence.

   -The World is too much with us.

   -Milton, thou shouldst be living at this hour.

   -Upon Westminster Bridge.

6. Alfred Tennyson: In Memoriam.

7. Henrik Ibsen: A Doll's House.

Section-B

1. Jonathan Swift, Gulliverôs Travels.

2. Jane Austen. Pride and Prejudice.

3. Henry Fielding. Tom Jones.

4. Charles Dickens. Hard Times.

5. George Eliot. The Mill on the Floss.

6. Thomas Hardy. Tess of the d'Urbervilles.

7. Mark Twain. The Adventures of Huckleberry Finn.

PAPER-II

(Answers must be written in English)

Texts for detailed study are listed below. Candidates will also be required to show adequate knowledge of the following topics and movements :

Modernism ; Poets of the Thirties ; The stream of consciousness Novel ; Absurd Drama ; Colonialism and Post-Colonialism; Indian Writing in English; Marxist, Psychoanalytical and Feminist approaches to literature; Post-Modernism.

Section-A

1. William Butler Yeats. The following poems :

   -Easter 1916.

   -The Second Coming.

   -A Prayer for my daughter.

-Sailing to Byzantium.

-The Tower.

-Among School Children.

-Leda and the Swan.

-Meru.

-Lapis Lazuli.

-The Second Coming.

-Byzantium.

2. T. S. Eliot. The following poems :

-The Love Song of J. Alfred Prufrock.

-Journey of the Magi.

-Burnt Norton.

3. W. H. Auden. The following poems :

-Partition.

-Musee des Beaux Arts.

-In Memory of W. B. Yeats.

-Lay your sleeping head, my love.

-The Unknown Citizen.

-Consider.

-Mundus Et Infans.

-The Shield of Achilles.

-September 1, 1939.

-Petition.

4. John Osborne: Look Back in Anger.

5. Samuel Beckett. Waiting for Godot.

6. Philip Larkin. The following poems :

   -Next.

   -Please.

   - Deceptions.

   - Afternoons.

   - Days.

   - Mr. Bleaney.

7. A.K. Ramanujan. The following poems :

   -Looking for a Cousin on a Swing.

   -A River.

   -Of Mothers, among other Things.

   -Love Poem for a Wife 1.

   -Small-Scale Reflections on a Great House.

   -Obituary.

   (All these poems are available in the anthology Ten Twentieth Century Indian Poets, edited by R. Parthasarthy, published by Oxford University Press, New Delhi).

Section-B

1. Joseph Conrad. Lord Jim.

2. James Joyce. Portrait of the Artist as a Young Man.

3. D.H. Lawrence. Sons and Lovers.

4. E.M. Forster. A Passage to India.

5. Virginia Woolf. Mrs. Dalloway.

6. Raja Rao. Kanthapura.

7. V.S. Naipaul. A House for Mr. Biswa.

HINDI

PAPER-I

(Answers must be written in Hindi)

Section-A

1. **History of Hindi Language and Nagari Lipi :**

   I. Grammatical and applied forms of Apbhransh, Awahatta & Arambhik Hindi.

   II. Development of Braj and Awadhi as Literary language during medieval period.

   III. Early form of Khari-boli in Siddha-Nath Sahitya, Khusero, Sant Sahitaya, Rahim etc. and Dakhni Hindi.

   IV. Development of Khari-boli and Nagari Lipi during 19th Century.

   V. Standardisation of Hindi Bhasha & Nagari Lipi.

   VI. Development of Hindi as a National Language during freedom movement.

   VII. The development of Hindi as a National Language of Union of India.

   VIII. Scientific & Technical Development of Hindi Language.

IX. Prominent dialects of Hindi and their inter-relationship.

X. Salient features of Nagari Lipi and the efforts for its reform & Standard form of Hindi.

XI. Grammatical structure of Standard Hindi.

Section-B

2. **History of Hindi Literature :**

I. The relevance and importance of Hindi literature and tradition of writing History of Hindi Literature.

II. Literary trends of the following four periods of history of Hindi Literature.

A. Adikalð Sidh, Nath and Raso Sahitya. Prominent poetsð Chandvardai, Khusaro,Hemchandra, Vidyapati.

B. Bhaktikalð Sant Kavyadhara, Sufi Kavyadhara, Krishna Bhaktidhara and Ram Bhaktidhara. Prominent Poetsð Kabir, Jayasi, Sur & Tulsi.

C. Ritikalð Ritikavya, Ritibaddhkavya & Riti Mukta Kavya. Prominent Poetsð Keshav, Bihari, Padmakar and Ghananand.

D. Adhunik Kalð

a. Renaissance, the development of Prose, Bharatendu Mandal.

b. Prominent Writersð Bharatendu, Bal Krishna Bhatt & Pratap Narain Mishra.

c. Prominent trends of modern Hindi Poetry: Chhayavad, Pragativad, Prayogvad, Nai Kavita, Navgeet and Contemporary poetry and Janvadi Kavita.

Prominent Poetsð Maithili Sharan Gupta, Prasad, Nirala, Mahadevi, Dinkar, Agyeya, Muktibodh, Nagarjun.

3. **Katha Sahitya :**

   A. Upanyas & Realism

   B. The origin and development of Hindi Novels.

   C. Prominent Novelistsð Premchand, Jainendra, Yashpal, Renu and Bhism Sahani.

   D. The origin and development of Hindi short story.

   E. Prominent Short Story Writersð Premchand, Prasad, Agyeya, Mohan Rakesh & Krishna Sobti.

4. **Drama & Theatre :**

   A. The Origin & Development of Hindi Drama.

   B. Prominent Dramatistsð Bharatendu, Prasad, Jagdish Chandra Mathur, Ram Kumar Verma, Mohan Rakesh.

   C. The development of Hindi Theatre.

5. **Criticism :**

   A. The origin and development of Hindi criticism : Saiddhantik, Vyavharik, Pragativadi. Manovishleshanvadi & Nai Alochana.

   B. Prominent criticsð Ramchandra Shukla, Hajari Prasad Dwivedi, Ram Vilas Sharma & Nagendra.

6. The other form of Hindi prose-Lalit Nibandh,Rekhachitra, Sansmaran, Yatra-vrittant.

PAPER-II

(Answers must be written in Hindi)

The paper will require first-hand reading of the prescribed texts and will test the critical ability of the candidates.

Section-A

1.	Kabir	Kabir Granthawali, Ed. Shyam Sundar Das (First hundred Sakhis)
2.	Surdas	Bhramar Gitsar, Ed. Ramchandra Shukla (First hundred Padas)
3.	Tulsidas	Ramcharit Manas (Sundar Kand) Kavitawali (Uttarkand)
4.	Jayasi	Padmawat Ed. Shyam Sundar Das (Sinhal Dwip Khand and Nagmativiyog Khan)
5.	Bihari	Bihari Ratnakar Ed. Jagnnath Prasad Ratnakar (First 100 Dohas)
6.	Maithili Sharan Gupta	Bharat Bharati
7.	Prasad	Kamayani (Chinta and Shraddha Sarg)
8.	Nirala	Rag-Virag, Ed. Ram Vilas Sharma (Ram Ki Shakti Puja & Kukurmutta)
9.	Dinkar	Kurukshetra
10.	Agyeya	Angan Ke Par Dwar (Asadhya Vina)
11.	Mukiboth	Brahm Rakhashas
12.	Nagarjun	Badal Ko Ghirte Dekha Hai, Akal Ke Bad, Harijan Gatha.

Section-B

1.	Bharatendu	Bharat Durdasha
2.	Mohan Rakesh	Ashad Ka Ek Din
3.	Ramchandra Shukla	Chintamani (Part I) (Kavita Kya Hai, Shraddha Aur Bhakti)
4.	Dr. Satyendra	Nibandh Nilaya-Bal Krishna Bhatt, Premchand, Gulab Rai, Hajari Prasad

		Dwivedi, Ram Vilas Sharma, Agyeya, Kuber Nath Rai.
5.	Premchand	Godan, Premchand ki Sarvashreshtha Kahaniyan, Ed. Amirt Rai, Manjusha-Prem Chand ki Sarvashreshtha Kahaniyan. Ed. Amrit Rai.
6.	Prasad	Skandgupta.
7.	Yashpal	Divya.
8.	Phaniswar Nath Renu	Maila Anchal.
9.	Mannu Bhandari	Mahabhoj.
10.	Rajendra Yadav	Ed. Dunia Sammantar (All Stories)

KASHMIRI

PAPER-I

(Answers must be written in Kashmiri)

Section-A

1. Genealogical relationship of the Kashmiri language: various theories.
2. Areas of occurrence and dialects (geographical/social).
3. Phonology and grammar.
   - i. Vowel and consonant system ;
   - ii. Nouns and pronouns with various case inflections ;
   - iii. Verbs : various types and tenses ;
4. Syntactic structure :
   - i. Simple, active and declarative statements ;
   - ii. Coordination ;
   - iii. Relativisation.

Section-B

1. Kashmiri literature in the 14th century (Socio-cultural and intellectual background with special reference to *Lal Dyad* and *Sheikhul Alam*).

2. Nineteenth century Kashmiri literature (development of various genres : *vatsun; ghazal and mathnavi.*

3. Kashmiri literature in the first half of the twentieth century (with special reference to Mahjoor and Azad; various literary influences).

4. Modern Kashmiri literature (with special reference to the development of the short story, drama, novel and nazm).

PAPER-II

(Answers must be written in Kashmiri)

Section-A

1. Intensive study of Kashmiri poetry upto the nineteenth century :

   (i) Lal Dyad ;

   (ii) Sheikhul Aalam ;

   (iii) Habba Khatoon.

2. Kashmiri poetry: 19th Century :

   (iv) Mahmood Gami (*Vatsans*)

   (v) Maqbool shah (*Gulrez*)

   (vi) Rasool Mir (*Ghazals*)

   (vii) Abdul Ahad Nadim (*N'at*)

   (viii) Krishanjoo Razdan (*Shiv Lagun*)

   (ix) Sufi Poets (Test in *Sanglaab,* published by the Department of Kashmiri, University of Kashmir) .

3. Twentieth Century Kashmiri poetry (text in *Azich Kashir Shairi,* published by the Deptt. of Kashmiri, University of Kashmir).

4. Literary criticism and research work : development and various trends.

Section-B

1. An analytical study of the short story in Kashmiri :

   (i) *Afsana Majmu'a,* published by the Deptt. of Kashmiri, University of Kashmir.

   (ii) *Kashur Afsana Az,* published by the Sahitya Akademi.

   (iii) *Hamasar Kashur Afsana,* published by the Sahitya Akademi.

   The following short story writers only: Akhtar Mohi-ud Din, Kamil, Hari Krishan Kaul, Hraday Kaul Bharti, Bansi Nirdosh, Gulshan Majid.

2. Novels in Kashmiri: :

   (i) *Mujrim* by G. N. Gowhar

   (ii) *Marun*ð Ivan Ilyichun, (Kashmiri version of Tolstoy's) The Death of Ivan Ilyich (published by Kashmiri Deptt.)

3. Drama in Kashmiri :

   (i) *Natuk Kariv Band* by Hari Krishan Kaul

   (ii) Qk Angy Natuk, Ed. Motilal Keemu, published by the Sahitya Akademi.

   (iii) *Razi Oedipus,* Tr. Naji Munawar, published by the Sahitya Akademi.

4. Kashmiri Folk Literature :

   (i) *Kashur Luki* Theatre by Mohammad Subhan Bhagat, published by the Deptt. of Kashmiri, University of Kashmir.

(ii) *Kashiry Luki Beeth* (all volumes) published by the J&K Cultural Akademy.

PERSIAN

PAPER-I

1. (a) Origin and development of the language (in outline)

   (b) Significant features of the grammar of the language Rhetorics Prosody

2. Literary History and Literary criticism-Literary movements, classical backgrounds, Socio Cultural influences and Modern trends; Origin and development of modern literary genres, including drama, novel, short story, essay.

3. Short Essay in Persian.

PAPER-II

This paper will require first-hand reading of the texts prescribed and will be designed to test the candidate's critical ability.

1. Firdausi, Shah Nama :

   (i) Dastan Rustam wa Suhrab ;

   (ii) Dastan Vizanba Maniza.

2. Nizammi Aruzi Samarquadi Chahar Maqala.

3. Khayyam, Rabaiyat (Radif Alif, Be, Dal).

4. Minucheheri - Qasaid (Racif Lam and Mim).

5. Maulana Rum Masunawi (1st Vol. 1st Half).

6. Sadi Shirazi Gulistan.

7. Amir Khusrau Majma-i-Dawawin Khusrau (Radif Alif and Te)

8. Hafiz,. Diwan -i-Hafiz (1st half)

9. Abdul Fazi. Ain-i-Akbari

10. Bahar Mashhadi Diwan-i-Bahar (I Vol.) (1st half)

11. Jawal Zadesh Yake Bud Yake Na Bud.

Note :—Candidates will be required to answer in Persian questions carrying not less than 25 per cent marks.

PUNJABI

PAPER-A

(Answers must be written in Punjabi in Gurumukhi script)

Section-A

(a) Origin of Punjabi Language; different stages of development and recent development in Punjabi Language; characteristics of Punjabi phonology and the study of its tones; classification of vowels and consonants.

(b) Punjabi morphology; the number-gender system (animate and inanimate), prefixes, affixes and different categories of Post positions; Punjabi word formation; Tatsam. Tad Bhav forms; Sentence structure, the notion of subject and object in Punjabi; Noun and verb phrases.

(c) Language and dialect : the notions of dialect and idiolect: major dialects of Punjabi : Pothohari, Majhi, Doabi, Malwai, Paudhi; the validity of speech variation on the basis of social stratification, the distinctive features of various dialects with special reference to tones language and script; origin and development of Gurumukhi; Suitability of Gurumukhi for Punjabi.

(d) Classical background : Nath Jogi Sahit. Medieval Literature : Gurmat, Suti, Kissa and Var : janamsakhis.

Section-B

a.	Modern Trends	Mystic, romantic, progressive and neomystic (Vir Singh, Puran Singh, Mohan Singh, Amrita Pritam, Bawa Balwant, Pritam Singh Safeer, J. S.Neki).
		Experimentalist (Jasbir Singh Ahluwalia, Avinder Ravi, Ajaib Kamal). Aesthetes (Harbhajan Singh, Tara Singh). Neo-progressive (Pash, Jagtar, Patar).
b.	Folk Literature	Folk songs, Folk tales, Riddles, Proverbs.
	Epic	(Vir Singh, Avtar Singh Azad, Mohan Singh).
	Lyric	(Gurus, Sufis and Modern Lyricists-Mohan Singh, Amrita Pritam, Shiv Kumar, Harbhajan Singh).
c.	Drama	(I.C. Nanda, Harcharan Singh,Balwant Gargi, S.S. Sekhon,Charan Das Sidhu).
	Novel	(Vir Singh, Nanak Singh, Jaswant Singh Kanwal, K.S. Duggal,Sukhbir, Gurdial Singh, Dalip Kaur Tiwana, Swaran Chandan).
	Short Story	(Sujan Singh, K. S. Virk, Prem Parkash, Waryam Sandhu).
d.	Socio-cultural Literary influences ;	Sanskrit, Persian and Western

Essay	(Puran Singh, Teja Singh, Gurbaksh Singh).
Literary Criticism	(S.S. Sekhon, Attar Singh, Kishan Singh, Harbhajan Singh, Najam Hussain Sayyad).

PAPER-II

(Answers must be written in Punjabi in Gurumukhi script)

This paper will require first-hand reading of the texts prescribed and will be designed to test the candidate's critical ability.

Section-A

Sheikh Farid	The complete Bani as included in the Adi Granth.
Guru Nanak	Japu Ji. Baramah. Asa di Var.
Bulleh Shah	Kafian.
Waris Shah	Heer.

Section B

Shah Mohammad	Jangnama (Jang Singhante Firangian)
Dhani Ram Chatrik	Chandan Vari
(Poet) Sufi Khana	Nawan Jahan
Nanak Singh (Novelist)	Chitta Lahu Pavittar Papi Ek Mian Do Talwaran
Gurbaksh Singh (Essayist)	Zindagi-di-Ras Nawan Shivala Merian Abhul Yadaan.

Balraj Sahni	Mera Roosi Safarnama
(Travelogu)	Mera Pakistani Safarnama
Balwant Gargi	Loha Kutt
(Dramatist)	Dhuni-di-Agg
	Sultan Razia
Sant Singh Sekhon	Sahityarth
(Critic)	Parsidh Punjabi Kavi
	Punjabi Kav Shiromani.

SANSKRIT

PAPER-I

(There will be three questions as indicated in the Question Paper which must be answered in Sanskrit. The remaining questions must be answered either in Sanskrit or in English.)

Section-A

1. Significant features of the grammar, with particular stress on Sanjna, Sandhi, Karaka, Samasa, Kartari and Karmani vacyas (voice usages) (to be answered in Sanskrit).

2. (a) Main characteristics of Vedic Sanskrit language

   (b) Prominent feature of classical Sanskrit language

   (c) Contribution of Sanskrit to linguistic studies

3. General knowledge of:-

   (a) Literary history of Sanskrit

   (b) Principal trends of literary criticism

   (c) Ramayana

   (d) Mahabharata

   (e) The origin and development of literary geners of :

Mahakavya

Rupaka (drama)

Katha

Akhyayika

Campu

Khandakavya

Muktaka Kavya.

Section-B

4. Essentials of Indian Culture with stress on :

   (a) Purusãrthas

   (b) Samskãras

   (c) Varnãsramavyavasthã

   (d) Arts and fine arts

   (e) Technical Sciences.

5. Trends of Indian Philosophy :

   (a) Mïmansã

   (b) Vedãnta

   (c) Nyaya

   (d) Vaisesika

   (e) Sãnkhya

   (f) Yoga

   (g) Bauddha

(h) Jaina

(i) Carvãka.

6. Short Essay (in Sanskrit).

7. Unseen passage with the questions (to be answered in Sanskrit).

PAPER-II

(Question from Group 4 is to be answered in Sanskrit only. Questions from Groups 1, 2 and 3 are to be answered either in Sanskrit or in English.)

Section-A

General study of the following groups :ð

Group 1

(a) Raghuvamsam-Kalidasa

(b) Kumarasambhavam-Kalidasa

(c) Kiratarjuniyam-Bharavi

(d) Sisupalavadham-Magha

(e) Naisadhiyacaritam-Sriharsa

(f) Kadambari-Banabhatta

(g) Dasakumaracaritam-Dandin

(h) Sivarajyodayam-S.B. Varnekar

Group 2

(a) Isãvãsyopanisad

(b) Bhagavadgitã

(c) Sundarakanda of Valmiki's Ramayana

(d) Arthasastra of Kautilya

Group 3 (a) Svapanavasavadattam-Bhasa

(b) Abhijnanasakuntalam-Kalidasa

(c) Mricchakatikam-Sudraka

(d) Mudraraksasam-Visakhadatta

(e) Uttararamacaritam-Bhavbhuti

(f) Ratnavali-Sriharshavardhana

(g) Venisamharam-Bhattanarayan

Group 4 Short notes in Sanskrit on the following :

(a) Meghadutam-Kalidasa

(b) Nitisatakam-Bhartrhari

(c) Pancatantra-

(d) Rajatarangini-Kalhana

(e) Harsacaritam-Banabhatta

(f) Amarukasatakam-Amaruka

(g) Gitagovindam-Jayadeva.

Section-B

This section will require first hand reading of the following selected texts:- (Questions from Groups 1 & 2 are to be answered in Sanskrit only) Questions from Groups 3 and 4 are to be answered either in Sanskrit or English.

Group 1 (a) Raghuvamsam-Canto I, Verses 1 to 10

(b) Kumarasambhavam-Canto I, Verses 1 to 10

(c) Kiratarjuniyaue-Canto I, Verses 1 to 10

Group 2	(a) Isavasyopanisad-Verses-1, 2, 4, 6, 7, 15 and 18
	(b) Bhagavatgita II Chapter Verses 13 to 25
	(c) Sundarakandam of Valmiki Canto 15, Verses 15 to 30 (Geeta Press Edition)
Group 3	(a) Meghadutam-Verses 1 to 10
	(b) Nitisatakam-Verses 1 to 10 (Edited by D.D. Kosambi Bharatiya Vidya Bhavan Publication)
	(c) Kadambari-Sukanasopadesa (only)
Group 4	(a) Svapnavasavadattam Act VI
	(b) Abhijnansakuntalam Act IV Verses 15 to 30 (M.R. Kale Edition)
	(c) Uttararamacaritam Act I Verses 31 to 47 (M.R. Kale Edition).

URDU

PAPER-I

(Answers must be written in Urdu)

Section-A

Development of Urdu Language :ð

(a) Development of Indo-Aryan :ð

(i) Old Indo-Aryan

(ii) Middle Indo-Aryan

(iii) New Indo-Aryan

(b) Western Hindi and its dialectsð Brij Bhasha, Khadi Boli, Haryanavi, Kannauji, Bundelið

Theories about the origin of Urdu language.

(c) Dakhani Urdu-origin and development, its significant linguistic features.

(d) Social and Cultural roots of Urdu language- and its distinctive features.

Script, Phonology, Morphology, Vocabulary.

Section-B

(a) Genres and their development :

(i) Poetry : Ghazal, Masnavi, Qasida, Marsia, Rubai Jadid Nazm.

(ii) Prose : Novel, Short Story, Dastan, Drama, Inshaiya, Khutoot, Biography.

(b) Significant features of : (i) Deccani, Delhi and Lucknow schools, (ii) Sir Syed movement, Romantic movement, Progressive movement, Modernism.

(c) Literary Criticism and its development with reference to Hali, Shibli, Kaleemuddin Ahmad, Ehtisham Hussain, Ale-Ahmad Suroor.

(d) Essay writing (covering literary and imaginative topics).

PAPER-II

(Answers must be written in Urdu)

(This paper will require first hand reading of the texts prescribed and will be designed to test the candidate's critical ability.)

Section-A

Mir Amman	Bagho-Babar
Ghalib	Intikhab-e-Khutoot-e Ghalib
Mohd. Husain Azad	Nairang-e-Khayal
Prem Chand	Godan
Rajendra Singh Bedi	Apne Dukh Mujhe Dedo
Abul Kalam Azad	Ghubar-e-Khatir

Section-B

Mir	Intikhab-e-Kalam-e-Mir (Ed. Abdul Haq.)
Mir Hasan	Sahrul Bayan
Ghalib	Diwan-e-Ghalib
Iqbal	Bal-e-Jibrail
Firaq	Gul-e-Naghma
Faiz	Dast-e-Saba
Akhtruliman	Bint-e-Lamhat

APPENDIX--III

Regulations for the Medical Examination of candidates for admission to the Jammu and Kashmir Police (Gazetted) Service.

These regulations are intended merely for the guidance of the Medical Examiners and are not meant to restrict their discretion in any manner.

1. To be passed as medically fit for admission to the J&K Police (Gazetted) Service, a candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the efficient performance of the duties of his appointment.

2. The candidateôs height will be measured as follows :ï ï

   He will remove his shoes and be placed against the standard with his feet together, and the weight thrown on the heels and not on the toes of outer sides of the feet. He will stand erect without rigidity and with the heel calves, buttocks and shoulders touching the standard; the chin will be depressed to bring the vertex of the heel level under the horizontal bar, and the height will be recorded in centimetres and millimeters.

3. The candidateôs chest will be measured as follows :ï ï

   He will be made to stand erect with his feet together and to raise his arms over his head. The tape will be so adjusted round the chest that its upper edge touches the interior angles of the shoulder blades behind and its lower edge the upper part of the nipple in front. The arms will then be lowered to hand loosely by the side, and care be taken that shoulders are not thrown upwards or backwards so as to displace the tape.

   The candidate will then be directed to take deep inspiration several times, and the maximum expansion of the chest will

be carefully noted. The range of the expansion should not be less than 5 cm. The minimum and maximum will then be recorded in cms-84-89, 86-91 etc.

In recording the measurement, the following table is given for the guidance of Medical Officer :ð

CHEST

Age last Birthday	Height without shoes in cms	Girth when fully expanded (cm)	Range of expansion not less that (cm)
21 and upwards	159 and under 165	88	5
	165 and under 173	89	5
	173 and under 178	90	5
	178 and under 183	91	5
	183 and upwards	93	5

4. The candidate will also be weighed, and his weight recorded in Kilograms. Fractions of Kilograms should not be noted.

5. The following conditions should be observed in connection with the test for acuteness of vision :ð

Vision of Candidates :

(a) No candidate will be accepted whose vision is less than :

Better eye	Worse eye
V-5/6 Reads 6.	V-6/12 Reads 1.

Spectacles will be allowed for either eye up to plus 5.0 or minus 5.0 D, provided that there are no morbid changes in the fundus.

(b) In myopia, if there is a posterior staphyloma, the spectacles must not exceed 2.5 D in either eye.

(c) In case of astigmatism, the combined lenses must not exceed 5 Diopters and there should be no fundus changes.

(d) Squint or any other morbid condition of the eyes of the lids of either eye liable to the risk of aggravation or recurrence will cause the rejection of the candidate.

(e) Each eye must have a full field of vision as tested by hand movements.

(f) Any defect in colour vision will be noted, but will not cause rejection of the candidate.

(g) In case of doubt or of serious abnormality, the opinion of the Ophthalmic Specialist will be obtained.

(h) No candidate will be accepted whose standard of vision does not come up to the specified requirements without the use of the contact glasses.

6. The Urine (passed in presence of the Examiner) should be examined and the result recorded.

7. The following additional points should be observed :ð

(a) That the candidateôs hearing in each ear is good, and that there is no sign of disease of the ear ;

(b) that his speech is without impediment ;

(c) that his teeth are in good order and that he is provided with dentures where necessary for effective mastication (well filled teeth will be considered as sound) ;

(d) that his chest is well formed and his chest expansion sufficient, and that his heart and lungs are sound ;

(e) that there is no evidence of abdominal disease ;

(f) that he is not raptured ;

(g) that he does not suffer from hydrocelea severe degree of varicose, varico sevens or piles ;

(h) that his limbs, hands and feet are well formed and developed and that there is free and perfect motion of all his joints ;

(i) that he does not suffer from any inveterate etc. skin disease ;

(j) that there is no congenital malformation or defect ;

(k) that he does not bear traces of acute or chronic disease pointing to an impaired constitution ;

(l) that he bears marks of efficient vaccination and evidence of re-vaccination within the last 12 months.

When any defect is found, it must be noted in the certificate and the Medical Examiner should state his opinion whether or not it is likely to interfere with the efficient performance of the duties which will be required of the candidate. If the condition is remediable by operation, it should be stated.

The following intimation is made for the guidance of the Medical Examiner :ð

1. In the medical examination of candidates, Medical Officers are specially required to use tact and judgment and to take proper precaution to secure privacy with the object of removing any objection which may be made by individuals to stripping.

2. Should a candidate object to the exposure of his person for the detection of haemorrhoide, venereal diseases, hernia

and disease of the testicles, scrotum and rectum, the candidate must, if this examination in his case is in the opinion of the Board necessary, be rejected.

3. The opinion of the Board accepting or rejecting a candidate is final and cannot be questioned on this ground. The Board is debarred from disclosing to any candidate, permanently unfit, the reasons for his rejection. In these cases, their opinion and report is to be treated as strictly confidential and for the information of Government only. Where, however the Board detects a temporary defect amendable to treatment, the candidate may be so informed in order that he may have the defect remedied and present himself for re-examination.

4. No person will be deemed qualified for admission to the service who shall not satisfy the Government that he has no disease, constitutional affection or bodily infirmity unfitting him or likely to unfit him, for that service.

5. It should be understood that the question of fitness involves the future as well as the present, and the main object of medical examination is to secure continuous effective service, and in the case of candidates for permanent appointment to prevent early pension or payment in case of premature death. It is, at the same time, to be noted that the question is one of the likelihood of continuous effective service and that the rejection of a candidate need not be advised on account of the presence of a defect which only in a small proportion of cases is found to interfere with continuous effectively service.

The candidate must make the statement required below prior to his medical examination and must sign the declaration appended thereto. His attention is specially directed to the warning contained in the note below :ð

1. State your name in full.

2. State your age and birth place.

3. (a) have you ever had small pox intermittent or any other fever, enlargement of suppuration of glands, spitting of blood, asthama, inflammation of lungs, heart disease, fainting attacks, rheumatism, or appendicitis.

   (b) any other disease or accident requiring confinement to bed, and medical or surgical treatment.

   OR

   (c) have you ever been rejected by a Medical Board or a duly constituted Medical Authority ?

4. When were you last vaccinated ?

5. Have you or any of your nearer relations been affected with consumption, scrofula, asthama, fits, epilepsy, or insanity ?

6. Have you suffered from any form of nervousness due to overwork or any other cause ?

7. Furnish the following particulars concerning your family:ð

I	II	III	IV
Fatherôs age if living and state of health	Fatherôs age at death and cause of death	Number of brothers living, their age and state of health	Number of brothers dead, their age and cause of death
V	VI	VII	VIII
Motherôs age if living and state of health	Motherôs age at death and cause of death	Number of sisters living, their age and state of health	Number of sisters dead, their age and cause of death

I. declare all the above answers to be, to the best of my belief, true and correct and accept the findings of the Board as final.

Candidate's Signature.

MEDICAL EXAMINER'S REPORT :

Question	Answers	Remarks
1. Has the declaration of the preceding page been signed by the candidate ?		
2. Are there any evidences of malformation congenital or acquired ?		
3. Is he free from scars and has he the full use of all limbs ?		
4. Are there any indications of a decided cashetic or diathetic state of constitution ?		
5. Are there any signs of disease of the nervous system ?		
6. Is the hearing good ? Is there any sign of any ear disease ?		
7. Has the candidate been vaccinated within the last 12 months ?		
8. What is the candidate's vision ? R. E. V. with glass. Reads. L. E. V. with glasses. Spectacles if any R. E. L. E.		

Question	Answers	Remarks
9. Is the candidate free from stamer or other serious defect in speech ?		
10. Are there any signs of disease of the bones, joints or parts connected therewith ?		
11. Is there any serious infection of the skin ?		
12. (a) Is the heart and arteries healthy ? (b) Blood pressureð Systolic/Diastolic ?		
13. Has the candidate haemorrhoide, vericoele or other affection of veins ?		
14. Is there any sign of disease of the digestive organs ?		
15. Are there any signs of disease of the respiratory organs ?		
16 Is the candidate free from rapture ?		
17. Is there any indication of disease of the genital organs ?		
18. (A) Is the urine free from :ð (1) Albumen (2) Sugar (B) Is the urine otherwise normal ?		

Question	Answers	Remarks
19. Is there anything in the health of the candidate likely to render him/her unfit for the efficient discharge of his/her duties in the service for which he is a candidate ?		
20. Do you consider the candidate in all respects qualified for the efficient and continuous discharge of his/her duties in the service for which he/she is a candidate ?		
(I) Height without shoes,		
(II) Girth of Chest (full inspiration).		
(III) Weight		

President.

Member.

Member.

Dated:é é é é é é

Note :ð 1. The candidate will be held responsible for the accuracy of the above statement. By willfully suppressing any information, he will incur the risk of losing the appointment and, if appointed of forfeiting all claims to superannuation allowance or gratuity.

Note :ð 2. A candidate for direct recruitment should attach with the prescribed application a treasury receipt for an amount of Rs.100 on account of Medical Examination fee which shall not be refundable in the event of the candidates failing to be selected by the Medical Board.

APPENDIX-IV

Regulations relating to the Physical Examination of Candidates.

These regulations are notified for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard. But it must be clearly understood that the Government reserves an absolute discretion to reject as unfit any candidate whom it may consider on the report of the Medical Board, to be physically disqualified and that its discretion, is in no respect limited by these regulations. These regulations are intended merely for the guidance of Medical Examiners and are not meant to restrict the discretion of the Government in any way.

(1) To be passed as fit for appointment, a candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the efficient performance of the duties of his appointment :

Provided that the Medical Board shall intimate the nature and degree of disability of physically challenged candidate in terms of Government Order No. 147-SW of 2014 dated 17-06-2014 with specific recommendations, if any, in respect of each of such candidate(s) for appointment to various posts through the Combined Competitive Examination.

(2) In the matter of correlation of age, height and chest girth of candidate, it is left to the Medical Board to use whatever correlation figures are considered most suitable as a guide in the examination of the candidates. If there be any disproportion with regard to height, weight and chest girth, the candidate should be hospitalized for investigation and X-Ray of the chest taken before the candidate is declared fit or not fit by the Board.

(3) The candidate will be weighed and his weight recorded in kilograms; fractions of a half a kilogram should not be noted.

(4) The candidateôs eye sight will be tested in accordance with the following rules. The result of each test will be recorded :ð

(i) **General :**ð The candidate's eyes will be subjected to a general examination directed to the detection of any disease or abnormality. The candidate will be rejected if he suffers from any squint or morbid conditions of eyes, eye-lids or contiguous structures of such a sort as to render or likely at a future date to render him unfit for service ;

(ii) **Visual Acuity :**ð The examination for determining the acuteness of vision includes two tests, one for distant, the other for near vision. Each eye will be examined separately.

There shall be no limit for minimum naked-eye vision but the naked-eye vision of the candidates shall, however, be recorded by the Medical Board or Medical Authority in every case, as it will furnish the basic information in regard to the condition of the eye.

The standards for distant and near vision with or without glasses shall be as follows :ð

Distant vision		Near vision	
Better eye	Worse eye	Better eye	Worse eye
6/9	6/9	Sn. 0 6	Sn. 0
	or		
6/6	6/12		

Note :ð (1) Total amount of Myopia (including the cylinder) shall not exceed 8.00 D in each eye. Total Hypermetropia shall not exceed + 6.00 D in each eye.

(2) **Fundus Examination :**ð Wherever possible, fundus examination will be carried out at the discretion of the Medical Board and results recorded.

(3) **Colour Vision :**ð Colour perception should be graded into a higher and a lower grade depending upon the size of the aperture in the lantern as described in the table below :ð

	Grade	Higher Grade of Colour perception	Lower Grade of Colour perception
1.	Distance between the Lamp and Candidate	4.9 meters	4.9 meters
2.	Size of Aperture	1.8 mm	1.8 mm
3.	Time of Exposure	5 sec.	5 sec.

(iii) Satisfactory colour vision constitutes recognition with ease and without hesitation of signal red, signal green and white colours. The use of Ishiharaôs Plates, shown in good light and suitable lantern like Edrige greenôs shall be considered quite dependable for testing colour vision. In doubtful cases, where a candidate fails to qualify when tested by only one of the two tests, both the tests should be employed.

(4) **Field of Vision :**ð The field of vision shall be tested in respect of all services by the confrontation method. Where such test gives unsatisfactory or doubtful results, the field of vision should be determined on the perimeter.

(5) **Night Blindness :** Night blindness need not be tested as a routine but only in special cases. No standard test for the testing

of night blindness or dark adaptation is prescribed. The medical board should be given the discretion to improvise such rough tests, e. g. recording the visual acuity with reduced illumination or by making the candidate recognize various objects in a darkened room after he/she has been there for 20 to 30 minutes. Candidateôs own statements should not always be relied upon but they should be given due consideration.

(6) Ocular conditions other than visual acuity :ð

(a) Any organic disease or a progressive refractive error which is likely to result in lowering the visual activity should be considered as a disqualification.

(b) **Trachoma :**ð Trachoma unless complicated shall not ordinarily be a cause for disqualification.

(c) If a person has one eye or if he has one eye which has normal vision and the other eye is ambylopic or has subnormal vision the usual effect is that the person is lacking stereoscopic vision for perception of depth. Such vision is not necessary for many civil posts. The medical board may recommend as fit, such persons provided the normal eye hasð

(a) 6/6 distant vision J1 near vision with or without correction with glasses / contact lens/efractive surgery like Lasik, ICL, IOL etc.

(b) Has full field of vision.

(c) **Normal colour vision wherever required :—** Provided the board is satisfied that the candidate can perform all the functions for the particular job in question. The above relaxed standard of visual acuity will NOT apply to J&K Police (G) Service .

(7) **Blood pressure :**ð The Board will use its discretion regarding Blood Pressure. A rough method of calculating normal maximum systolic pressure is as follows :ð

(i) With young subjects, 15-25 years of age, the average is about 100 plus the age.

(ii) With subjects over 25 years of age, the general rule of 110 plus half the age seems quite satisfactory.

N.B. :ð As a rule any systolic pressure over 140 mm. and diastolic over 90 mm. should be regarded as suspicious and the candidate should be hospitalized by the Board before giving their final opinion regarding the candidateôs fitness or otherwise. The hospitalization report should indicate whether the rise in Blood Pressure is of a transient nature due to excitement etc. or whether it is due to any organic disease. In all such cases, X-Ray and electrocardiographic examinations of heart and blood urea clearance test should also be done as a routine. The final decision as to the fitness or otherwise of a candidate will, however, rest with the medical board only.

Method of taking Blood Pressure :—

The mercury manometer type of instrument should be used as a rule. The measurement should not be taken within fifteen minutes of any exercise of excitement ; Provided the patient and particularly his arm is relaxed, he may be either lying or sitting. The arm is supported comfortably at the patientôs side in a more or less horizontal position. The arm should be free from the clothes to the shoulder. The cuff completely deflated should be applied with the middle of the rubber over the inner side of the arm, and its lower edge an inch or two above the bend of the elbow. The following turns of cloth bandage should spread evenly over the bag to avoid bulging during inflation.

The brachial artery is located by palpitation at the bend of the elbow and the stethoscope is then applied lightly and centrally over

it below, but not in contact with the cuff. The cuff is inflated to above 200 mm. Hg. and then slowly deflated. The level at which the column stands when soft successive sounds are heard represents the Systolic Pressure. When more air is allowed to escape the sounds will be heard to increase in intensity. The level at which the well-heard clear sound change to soft muffled fading sounds represents the diastolic pressure. The measurements should be taken in a fairly brief period of time as prolonged pressure of the cuff is irritating to the patient and will vitiate the readings. Re-checking, if necessary, should be done only a few minutes after complete deflation of the cuff. Sometime as the cuff is deflated, sounds are heard at a certain level; they may disappear as pressure falls and re-appears at a still lower level. This ñSilent gapò may cause error in reading.

8. The urine (passed in presence of the examiner) should be examined and the results recorded. Where a Medical Board finds sugar present in a candidateôs urine by the usual chemical tests, the Board will proceed with the examination with all its other aspects and will also specially note any signs or symptoms suggestive of diabetes. If except for the glycosauria the Board finds the candidate conforms to the standard of medical fitness required, they may pass the candidate. ñfit subject to the glycosauria being non-diabeticò and the Board will refer the case to a specified specialist in Medicine who has hospital and laboratory facilities at his disposal. The Medical Specialist will carry out whatever examinations clinical and laboratory he considers necessary including a standard blood sugar tolerance test and will submit his opinion to the Medical Board upon which the Medical Board will base its final opinion ñfitò or ñunfitò. The candidate will not be required to appear in person before the Board on the second occasion. To exclude the effects of medication it may be necessary to retain, a candidate for several days in hospital under strict supervision.

9. The following additional points should be observed :ð

(a) that the candidateôs hearing in each ear is good and that there is no sign of disease of the ear. In case it is defective, the candidate should be examined by the ear specialist ; Provided that if the defect in hearing is remediable by operation or by use of a hearing aid, a candidate cannot be declared unfit on that account provided he/she has no progressive disease in the ear ;

(b) that his/her speech is without impediment ;

(c) that his/her teeth, are in good order and that he/she is provided with denture where necessary for effective mastication (well filled teeth will be considered as sound) ;

(d) that the chest is well formed and his/her chest expansion sufficient; and that his heart and lungs are sound ;

(e) that there is no evidence of any abdominal disease ;

(f) that he/she is not raptured ;

(g) that he/she does not suffer from hydrocele, a severe degree of varicocele, varicose veins or piles ;

(h) that his/her limbs, hands and feet are well formed and developed and that there is free and perfect motion of all his joints ;

(i) that he/she does not suffer from any inveterate skin disease ;

(j) that there is no congenital malformation or defect ;

(k) that he/she does not bear traces of acute or chronic disease pointing to an impaired constitution ;

(l) That he/she bears-marks/proof of efficient vaccination ; and

(m) that he/she is free from communicable disease.

10. Radiographic examination of the chest should be done as a routine in all cases for detecting any abnormality of the heart and lungs, which may not be apparent by ordinary physical examination.

11. When any defect is found it must be noted in the certificate and the medical examiner should state his opinion whether or not it is likely to interfere with the efficient performance of the duties which will be required of the candidate.

Note :ð Candidates are warned that there is no right of appeal from a Medical Board, special or standing, appointed to determine their fitness for the above service. If however, the Government is satisfied on the evidence produced before it of the possibility of an error of judgment in the decision of the First Board, it is open to the Government to allow an appeal to a Second Board. Such evidence should be submitted within one month of the date of the communication in which the decision of the First Medical Board is communicated to the candidate, otherwise no request for an appeal to a second Medical Board, will be considered.

If any medical certificate is produced by a candidate as a piece of evidence about the possibility of an error of judgment in the decision of the First Board, the certificate will not be taken into consideration unless it contains a note by the medical practitioner concerned to the effect that it has been given in full knowledge of the fact that the candidate has already been rejected as unfit for service by the Medical Board.

MEDICAL BOARD'S REPORT

The following intimation is made for the guidance of the Medical Examiner :ð

1. The standard of physical fitness to be adopted should make on due allowance for the age and length of service, if any, of the candidate concerned.

No person will be deemed qualified for admission to the Public Service who shall not satisfy the appointing authority, as the case may be, that he/she has no disease, constitutional infection, or bodily infirmity unfitting him, or likely to unfit him/her for that service.

It should be understood that the question of fitness involves the future as well as the present and that one of the main objects of medical examination is to secure continuous effective service. It is at the same time to be noted that the question is one of the likelihood of continuous effective service, and that rejection of a candidate need not be advised on account of the presence of a defect which only in a small proportion of cases is found to interfere with continuous effective service.

A lady doctor will be co-opted as a member of the Medical Board whenever a woman candidate is to be examined.

The report of the Medical Board should be treated as confidential.

In case where a candidate is declared unfit for appointment in the Government Service the grounds for rejection may be communicated to the candidate in broad terms without giving minute details regarding the defect pointed out by the Medical Board.

In case where a Medical Board considers that a minor disability disqualifying a candidate for Government Service can be cured by treatment (medical or surgical), a statement to that effect should be recorded by the Medical Board. There is no objection to a candidate being informed of the Boardôs opinion to this effect by the appointing authority and when a cure has been effected it will be open to the authority concerned to ask for another Medical Board.

In the case of candidates who are to be declared ñTemporarily Unfitò the period specified for re-examination should not ordinarily exceed six months at the maximum. On re-examination after the

specified period these candidates should not be declared temporarily unfit for a further period but a final decision with regard to their fitness for appointment or otherwise should be given.

(a) **Candidate's statement and declaration :**

The candidate must take the statement required below prior to his Medical Examination and must sign the Declaration appended thereto. His/her attention is specially directed to the warning contained in the Note below : ð

1.	State your name in full (in block letters)	é é é é é é é
2.	State your age and birth place	é é é é é é é .
3. (a)	have you ever had small-pox, intermittent or any other fever, enlargement or suppuration of glands, spitting of blood, asthma heart disease, lung disease, fainting attacks, rheumatism, appendicitis ?	é é é é é é é é .
(b)	any other disease or accident requiring confinement to bed and medical or surgical treatment ?	é é é é é é é é .
4.	When were you last vaccinated ?	é é é é é é é é .
5.	Have you or any of your near relations been affected with consumption, scrofula, gout, asthma, fits, epilepsy, or insanity ?	é é é é é é é
6.	Have you suffered from any form of nervousness due to over-work or any other cause ?	é é é é é é é é ..

7. Furnish the following particulars concerning your family :ð

I	II	III	IV
Fatherôs age if living and state of health	Fatherôs age at death and cause of death	Number of brothers living, their age and state of health	Number of brothers dead, their age and cause of death
V	VI	VII	VIII
Motherôs age if living and state of health	Motherôs age at death and cause of death	Number of sisters living, their age and state of health	Number of sisters dead, their age and cause of death

8. Have you been examined by a Medical Board before ? é é é é é é é .

9. If answer to the above is yes, please state what service/services you were examined for ? é é é é é é é ..

10. Who was the examining authority ? é é é é é é é é

11. When and where was the Medical Board held ? é é é é é é é ..

12. Result of the Medical Boardôs Examination if communicated to you or if known ? é é é é é é é .

I declare all the above answers to be, to the best of my belief, true and correct.

Candidateôs Signatureé é é é é é é é

Signed in my presence.

Signature of the Chairman of the Board.

Note :ð The candidate will be held responsible for the accuracy of the above statement. By willfully suppressing any information, he/ she will incur the risk of losing the appointment and, if appointed, of forfeiting all claims to Superannuation Allowance or Gratuity.

(b) Report of Medical Board on (name of candidate) physical examination.

1. General development :ð Goodé é é .Fairé é é é é . Pooré é é é é é é é é
   Nutrition : Thiné é é é ..Averageé é é é é Obeseé é é .. Height (Without shoes)é é é é é Weighté é é é é . Best Weighté é é é é é é é é é é é Any recent change in weighté é é é é é é é é é é .....Temperatureé é é é .

Girth of Chest :ð

(1) (After full inspiration)

(2) (After full expiration)

2. Skin : Any obvious disease é é é é é é é .
3. Eyes :ð
   (1) Any disease é é é é é é é ..
   (2) Night blindness é é é é é é é ..
   (3) Defect in colour vision é é é é é é é .
   (4) Field of vision é é é é é é é .
   (5) Visual acuity é é é é é é é

Acuity of vision	Naked-eye	With glasses Sph.	Strength of glass Cyl.	Axix
Distant Vision		RE		
		LE		
Near Vision		RE		
		LE		

Hypermetropia (Manifest) RE/LE

4. Ears Inspectioné é é é ..Hearing Right Earé é é é é é ..

   Left Earé é é é é é ..

5. Glandsé é é é é é é Thyroidé é é é é é

6. Condition of teethé é é é é é

7. Respiratory System:- Does physical examination reveal anything abnormality in the respiratory organs ? If yes, explain fullyé é é é é é é é ..

8. Circulatory System : ð

   (a) Heart : Any organic lesions ? é é é é é . Rate Standingé é é é é
   (After hopping 25 timesé é é é é é é é é ..
   2 minutes after hoppingé é é é é é é é é ..)
   (b) Blood Pressure: Systolicé é é é é .Diastolicé é é é é

9. Abdomen: Girthé é é é é é .Tendernessé é é .
   Herniaé é é é é é é é é é ..
   (a) Palpable : Liveré é é é é Spleené é é é é
   Kidneysé é é é é é é Tumoursé é é é ..
   (b) Hemorrhoidsé é é é é .Fistulaé é é é é .

10. Nervous system: Indication of nervous or mental disabilities.

11. Loco-Motor System: Any abnormalityé é é é é é .

12. Genito Urinary System : Any evidence of Hyderocele, Variocele etc.

Urine Analysis :ð

(a) Physical appearance.
(b) Sp. Gré é é é é

(c) Albumené é é é .

(d) Sugaré é é é é é

(e) Castesé é é é é é ..

(f) Cellsé é é é é é ..

13. Report of X-Ray Examination of Chest.

14. Is there anything in the health of the candidate likely to render him/her unfit for the efficient discharge of his/her duties in the service for which he/she is a candidateé é é é é é é

Note :ð The Board should record their findings under one of the following three categories :ð

(i) Fit.

(ii) Unfit on account of é é é é é é é .

(iii) Temporary unfit on account of é é é é é é

Chairmané .é é é é é ..

Memberé é é é é é ..

Placeé é é é é é ..

Memberé é é é é é ..

Datedé é é é é é ..